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AUTHOR Lightbown, Patsy M.; Barkman, Bruce
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ABSTRACT

The first year of a three-year longitudinal study of the English language development of 175 French-speaking elementary and secondary school students in Quebec, Canada, is described. The major study goals are: to obtain precise longitudinal information on ESL development; to describe aspects of classroom interaction, including language used by the teacher and language contained in teaching materials; and to examine the relationships between classroom interaction and learning. Study topics include: (1) group and individual progress toward native-like use of English in linguistic and communicative performance; (2) variability in learners' performance on the same linguistic elements under different conditions (e.g., classroom drill, oral interview, written task); (3) the effectiveness, at different stages in ESL development, of specific classroom activities; and (4) the specific effects of out-of-class exposure to English. During the first year, 70 hours of classroom interaction were recorded and transcribed. Language use questionnaires, initial oral interviews, a picture card description task, grammaticality judgment tests, cloze tests, and other measures were administered and partially analyzed. The major chapters in the report describe the work on learners' language, classroom interaction, and text analysis. (SW)

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INTERACTIONS AMONG LEARNERS, TEACHERS, TEXTS, AND METHODS OF ENGLISH AS A SECOND LANGUAGE

Progress Report
1977 - 78

Principal Investigators:

Patsy M. Lightbown and Bruce Barkman,
TESL Centre, Concordia University

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P.M.L
B.B.

INTRODUCTION

The focus of this study is the English language development of French-speaking learners in elementary and secondary schools in Quebec. These students' major exposure to English is in English as a second language (ESL) classrooms although some of them have opportunities to use English outside school. Upon completion of secondary school, they will have had approximately 1000 hours of instruction in ESL, thinly spread over a seven-year period starting in Grade 5, and they will be able to use English in a variety of communicative situations.

Goals

The major goals of this study are (1) to obtain precise longitudinal information on the ESL development of a large group of ESL learners, (2) to describe aspects of classroom interaction including the language used by the teacher and the language used in the teaching materials, and, finally, (3) to discover and describe the relationships between classroom interaction and learners' developing knowledge of English in order to make recommendations for the improvement of ESL teaching.

The achievement of these goals requires the development of research methodology for describing and analyzing learners' language, classroom interaction, and text materials. In the first year of the study, we have thus concentrated on the development of methodology, on the collection of a substantial body of data, and on intensive analysis of samples of the data. Thus, this report presents a description of the methodology for

data collection and data analysis and preliminary findings of studies on the major topics under investigation.

Major Topics

Through detailed analysis of learners' language and classroom interaction over time, we will be able to provide an account of the crucial factors in the relationship between language teaching and language learning. Among the major topics under investigation are:

(1) group and individual progress toward native-like use of some elements of English, both linguistic (e.g., grammatical morphemes) and communicative (e.g., asking and answering questions);

(2) apparent variability in learners' performance on the same linguistic elements under different conditions (e.g., classroom drill, oral interview, written task);

(3) the effectiveness, at different stages in ESL development, of specific classroom activities for bringing about changes in learners' language use and language knowledge;

(4) the specific effects of out-of-class exposure to English on individual learners' language.

These topics, based on a review of existing literature and the preliminary analyses of our data, are the basis for the formulation of specific hypotheses to be tested in the second year of the study.

In the second year, the use of the computer will permit more extensive analysis of data collected and partially analyzed in the first year. Data collection will continue, focusing on particular questions raised by the preliminary analyses already completed.

During the final year of the study, progress made toward the first two goals will permit us to work toward the third goal -- the discovery of relationships between what is taught and what is learned over the period during which most francophone students in Quebec receive formal instruction in English.

Subjects

Three groups of learners (approximately 175 in all) from two schools near Montreal are being followed for a two-year period, starting respectively in Grade 6, Grade 8, and Grade 10.* Students in the younger groups may be followed on a limited basis during the third year. This design permits both longitudinal and cross-sectional comparisons across most of the period of ESL instruction.

The observation classes have not been chosen at random. On the contrary, due to the intensive schedule of observation and testing, it was necessary to choose schools and teachers where we could be sure of long-term cooperation. Our expectation of full cooperation has been more than fulfilled. The three teachers whose classes we have observed during the first year of the study have at least five years of ESL experience and all have had good academic training. One is a native speaker of English; the other two have native-like command of the language.

The students come from middle class suburban and rural homes. The students in Grade 6 at the beginning of the period of observation, began receiving ESL instruction in Grade 4 using

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* In this report, the grade levels of our subjects are referred to as Grades 6, 8, and 10, rather than as Primary 6 and Secondary II and IV as is the practice in Quebec. The term "Secondary students" refers to both Grade 8 and Grade 10 subjects. Grade 6 students are sometimes referred to as "elementary students".

the Look, Listen, and Learn textbooks (Alexander, 1972). Most of the secondary students began receiving ESL instruction in Grade 5. Many students currently in Grade 8 used the Look, Listen, and Learn materials in Grades 5 and 6; those in Grade 10 used a variety of different materials. All secondary students have been using the Lado English Series (Canadian Edition, 1971) since Grade 7. A questionnaire administered at the beginning of the observation period confirmed our assumption that the students have little exposure to English outside school.

Data Base

Because the longitudinal nature of the study required as early a start as possible, we recorded large samples of classroom interaction and individual interviews with learners. Approximately 70 hours of classroom recordings (10 hours from each of 7 classes) have been made, transcribed and verified for accuracy. About 50 hours of interviews with a total of more than 200 students have been recorded, transcribed, and verified. The total corpus consists of over 5000 pages of transcript.

In addition to the classroom interaction and interview data, the total data base includes standardized tests, provincial examinations, cloze tests, written assignments and teacher-made tests. All these different kinds of data are being analyzed in order to obtain the broadest possible picture of learners' language so that findings can be attributed to true development rather than to performance which occurs in only one language use condition, e.g., in the formal test situation.

Plan of the Report

We are concerned with describing the output -- what learners can say and understand and what they know about the language they

are learning, and the input -- the classroom language, the language of the textbook, and to a limited extent, the language exposure outside the classroom. Thus there are three major areas of research on which this study draws: language acquisition research, classroom interaction research, and the analysis of texts and methods for second language teaching.

The report is divided into four chapters. The first two chapters, Learners' Language and Classroom Interaction, include detailed reports of the major work accomplished in the first year of the study. Chapter 3, Text Analysis, is a review of the literature in text analysis and presents a plan for the analysis of materials used in the schools where the present research is being carried out. Chapter 4 is a sketch of the plans for carrying out the long term goals of the project, the discovery and description of relationships between what is taught and what is learned in ESL classrooms and the formulation of recommendations for improving second language instruction in classrooms.

Chapter 1

LEARNERS' LANGUAGE

Previous Research

Our work in describing and accounting for aspects of second language learners' linguistic development is based on three major issues in language acquisition research:

(1) Universals and variation
(2) Cross-sectional vs. longitudinal observations
(3) Relationships between linguistic input and learners' language

A brief overview of research in these areas is presented below. This is followed by progress reports on ongoing projects within the learners' language study.

Universals and variation in language development. During the past two decades, a major research question has been the extent to which second language learning is like first language acquisition. Attempts have been made to discover the "natural sequences" in the L2 learner's development, starting from the assumption, based on some first-language acquisition research, that there are important developmental similarities (perhaps even universals) for all language learners.

Several researchers have observed what they consider to be universals in language acquisition. In first-language acquisition, this theory of universals was proposed by Chomsky (1957),

1965, 1968) and McNeill (1966, 1970), and has been advanced more concretely on the basis of observations of children's language acquisition in different language environments by Slobin (1973).

Language acquisition research has suggested that among English-speaking children, there are regular and predictable sequences in the development of certain linguistic sub-systems. For example, the sequence of emergence of a number of grammatical morphemes was found to be quite similar among a small group of children studied longitudinally (Brown, 1973); this sequence was confirmed with a larger number of children in cross-sectional studies (de Villiers and de Villiers, 1973). In addition to consistencies in the development of linguistic structure, impressive similarities have been found to exist in the semantic content of early child language (Brown, 1973; Bloom, Lightbown, and Hood, 1975). Such apparent universals in child language may be due to similarities in cognitive development (Bloom, 1973; Bloom, et al., 1975; Brown, 1973); and to similarities in parents' speech (Snow, 1972; Phillips, 1973), and not necessarily to the innate linguistic universals proposed by Chomsky. However, researchers in second language acquisition have also found certain consistencies in the development of second language learners -- both children and adults -- and in the speech addressed to second language learners.

Some theorists have hypothesized that observed consistencies in L1 and L2 development are due to universal language acquisition structures -- L1 or L2 (Corder, 1967, 1971). Dulay and Burt (1973) hypothesized that children would learn English in the same way, in the same developmental sequence, whether English was their L1 or L2. Some researchers have found support for this L1 = L2 hypothesis in empirical research tracing the

development of comprehension of some linguistic patterns (Cook, 1973; d'Anglejan and Tucker, 1975; Bever and Denton, 1975).

Other researchers have observed important differences between L1 and L2 acquisition but important similarities among second language learners with different mother tongues. This observation has led to the hypotheses that L2 = L2. According to the L2 = L2 hypothesis, L2 learners, no matter what their first language background, will all learn the L2 in the same way, in the same developmental sequence, and their problems and successes will be determined by characteristics of the L2 rather than by differences or similarities between L1 and L2 (Bailey, Madden, and Krashen, 1974 and Dulay and Burt, 1974a, 1974b).

Most recently, however, the belief in universals in both L1 and L2 acquisition has been challenged by research showing that detailed longitudinal analysis of individual learners reveals important variability in the course of language acquisition of different learners. In L1 research, see for example, Bloom, Hood and Lightbown (1974); Bloom, Lightbown, and Hood (1975), Nelson (1973), Ramer (1976), Braine (1976). For L2 research, see Hatch (1974), Larsen-Freeman (1975) and, Cazden, Cancino, Rosansky and Schumann (1975). Rosansky (1976a, 1976b) states that the consistency found in some second language acquisition research has seemed more impressive than it actually is because of the choice of certain elicitation materials and certain statistical analyses of the data, which bias the results.

A number of researchers have found that factors associated with success in one type of second language learning environment are not predictive of success in other types of environments or courses. For example, Hamayan, Genesee, & Tucker (1977)

report that exposure to French outside the school setting was "more predictive of success" on a French achievement test for students in regular French as a second language course than for students in immersion programs. Oller (1977) compares the results of many studies on the relationship between attitudes toward the target language population and success in language learning. He concludes that positive attitudes and so-called integrative motivation are more often associated with success in environments where interaction with the target language population is a real possibility ("second language" contexts) than in environments where one is unlikely to encounter speakers of the language outside the classroom ("foreign language" contexts).

Furthermore, factors associated with success in some aspects of language learning may not predict success in another aspect. For example, in a study of pupils in French immersion programs, higher IQ scores were associated with higher scores on tests of "academic language skills" but not necessarily with the development of "interpersonal communication skills" (Genesee, 1976, p. 500).

Cross-sectional vs. longitudinal studies. A major problem in second language research is that it has been almost exclusively cross-sectional. Until recently there have been few detailed longitudinal studies of second language learners' development. (Important exceptions include Hakuta, 1974; Hanania, 1974; Gillis and Weber, 1976; Dato, 1975; Cazden et al., 1975; Wode, 1976, 1978). Most longitudinal studies are case studies of one or two individuals. Recent cross-sectional research in first language acquisition has been based on hypotheses taken from the results of longitudinal studies. Second language

acquisition research does not yet have such a foundation. The absence of longitudinal studies is especially serious since there is no single reliable index of second language learners' developmental levels. Thus, many cross-sectional studies may be obtaining data which do not actually represent the levels of development which they claim to be examining. Cross-sectional research must be complemented by longitudinal research for two reasons:

(1) If the universal sequences of development which have emerged in cross-sectional research really exist, they should be verifiable through comparisons with the description of individual learners' speech.

(2) The results of longitudinal research will generate new hypotheses about language development universals which can then be tested further in cross-sectional studies.

The design of the present study permits both longitudinal and cross-sectional comparisons of learners' language knowledge and language use.

Relationships between input and output. In second language teaching and learning, what is taught and what is learned have alternately been assumed to be essentially isomorphic (e.g., in audio-lingual language teaching) or only tenuously related (e.g., in recent language acquisition research showing strong patterns of similar learning sequences in learners with different learning environments). These two extreme views of the input-output relationship reflect the major linguistic and psychological theories which have been held by teachers and researchers at different points over the past forty years. Surprisingly, there has been little research which has actually compared input and output systematically.

In the 1960s, many reports from L1 research indicated that there was no direct relationship between the frequency with which certain linguistic items appeared in parental speech and the order in which children acquired the items (Brown, 1973). Similarly, parental responses to children's language in the form of imitation, praise, or expansion did not appear to predict orders of acquisition of linguistic structures (Brown, Cazden, and Bellugi, 1969). Nevertheless, many researchers were convinced that there must be important - and systematic - relationships between parents' speech and children's language development. The results of several studies indicated that speech addressed to children was different from that addressed to adults and that this speech changed in systematic ways over time with the child's increasing ability to use language (Phillips, 1973; Snow, 1972). Subsequent research on parents' language has focused on pragmatic as well as syntactic and morphological aspects of their speech (see, for example, articles in Snow & Ferguson, 1977). In studies in which the speech of both adult and child in interaction are analyzed developmentally, the close relationship between the input and output become more apparent (Bloom, Hood, & Lightbown, 1974; Bloom, Rocissano, and Hood, 1976; Moerck, 1977).

In L2 acquisition research, partly as a result of the trend in L1 research to go back to a closer examination of the input, there have been a few studies which have dealt with speech addressed to learners. A number of studies have concerned themselves with "foreigner talk" - the special linguistic register which some people adopt when speaking to non-native speakers (Ferguson, 1975). Some similarities between foreigner talk and the speech addressed to young children have been noted. However, none of the published research to date has established a causal

link between the use of a simplified register and the rate or sequence of acquisition on the part of L2 learners.

Gaies (1977) used an analysis based on Hunt's (1970) T-units to describe the speech of ESL teachers in their ESL classrooms talking to students and in a seminar talking to each other. He showed that the teachers' ESL speech was simpler than their peer speech and that the ESL speech increased in complexity, presumably because the learners were increasingly able to handle more complex speech. Gaies uses his results to support a claim that L2 and L1 learning are similar although he does not report on any analysis of learners' speech.

Hatch and Wagner-Gough (1976) consider the input to be an important under-explored area in L2 acquisition research. They report that the order in which Wh-forms emerge in the speech of a number of L2 learners matched the frequency with which these forms were addressed to them. Much of the input data which Hatch and Wagner-Gough had at their disposal, however, was taken from transcripts of investigator-learner interactions. Such data may not be representative of the learners' overall exposure.

Larsen-Freeman (1976) found significantly high correlations between the accuracy with which adult ESL learners used certain grammatical morphemes and the frequency with which these morphemes occurred in samples of speech parents addressed to young English L1 learners (using Brown's (1973) data on the parents of his subjects Adam, Eve, and Sarah).

A more direct comparison of input and output has recently been completed by Hamayan (1978). She compared the frequency in teachers' speech of certain grammatical structures with the

success students had in recognizing correct and incorrect uses of these structures. The subjects in her study were English-speaking children in a French immersion class, English-speaking children in regular French classes, and French-speaking children in regular French classes. Hamayan found, with most structures, a high correlation between their frequency in the teachers' speech and the students' ability to identify correct and incorrect uses of them.

In most previous L2 acquisition research, learners' language knowledge and language use have been tested cross-sectionally and without controls for the input. Indeed, it has been a major goal of much L2 research to show that instruction does not account for the sequence in which learners acquire aspects of the linguistic system. Rather, according to this research, acquisition sequences are determined by interactions between the learners' language acquisition devices and the inherent complexity of the target language (see, e.g., Bailey, Madden, & Krashen, 1974; Dulay & Burt, 1974a & b). Perkins and Larsen-Freeman (1975) attempted to design research which would contrast learners with considerable informal language exposure to others whose language learning experience included more formal instruction. They were hampered by methodological problems which greatly restricted the strength of their tentative conclusion that differences in learning environments made little difference in acquisition sequences.

In the present study it has been possible to obtain large samples of teachers' speech and the language of the learners in their classes in order to begin to make meaningful comparisons between input and output. In addition it will be possible to analyze the textbooks used in the classes and to compare the language used there with the language of the teachers and learners.

Progress Reports

Progress reports on five studies on separate but related issues in learners' language knowledge, language use, and language processing are presented below. The first report presents an overview of the procedures and instruments which we have examined and/or used for evaluating learners' language. The second report is concerned with group and individual variation observed in our subjects' second language development. The third report describes research to date on the use of questions in both teachers' and learners' speech. The fourth report is is on language interaction between native-speakers and second language learners and the effects on the learning which such interaction may have. The fifth report is a brief sketch of other studies in progress, including one on language aptitude, one on mother tongue interference, and one on the effects of formal instruction.

Each of these studies is in progress and will continue over the coming year. The reports below are progress reports on background, methodology, preliminary results and plans for the continuation of the studies.

Measuring and Evaluating Learners' Language Use and Language Knowledge

In the investigation of learners' language, we have sought to obtain a wide variety of types of data, in order to determine whether certain findings represent genuine patterns in the development of linguistic knowledge or merely task-specific or context-specific performance. Because of the importance which we attach to a longitudinal design and to a large and varied data base it was important to begin data collection as early as possible. Thus, in the early months of the study, we recorded classroom interaction and student interviews which could serve as a basis for formulating specific questions about the learners' language. Subsequent data collection procedures focused on these specific questions.

Classroom data collected during the early months of the study formed the basis for the derivation of classification systems to describe the classroom interaction (see Chapter 2). Classroom data were also examined for apparent regularities in students' language in order to choose for further study specific linguistic structures which could be expected to change over time and provide the greatest information about language learning processes.

Below is a description of each of the major data collection procedures. Procedures for classroom data are described in detail in Chapter 2 and will not be described here. The picture

description task and grammaticality judgement tests are discussed more fully in the progress report on variation in learners' language and will be described only briefly here. Similarly, some aspects of the first oral interview are discussed in the progress report on native speakers' speech to natives and non-natives. Only a preliminary report on the results of the Comprehensive English Language Test (CELT) and cloze tests will be given below since only partial quantitative analyses of these data have been completed. The projected qualitative analyses of these tests will permit us to integrate them with other aspects of the study.

Language Use Questionnaire

A questionnaire was designed to measure the exposure the learners had to English outside their ESL classes. Based on the results of this questionnaire, an index of the students' exposure to English was devised, assigning points for such things as English-speaking friends or parents, prior attendance at an English school, etc. Overall, students averaged 1.48 points out of a possible score of 12, with English television and popular music providing most of the extra-classroom exposure. A fuller report on the results of the language use questionnaire and a copy of the questionnaire itself are appended. See Appendix A.

Initial Oral Interview

An initial oral interview was conducted with all the students with three objectives in mind. First, we wanted an idea of the students' reactions to the interview situation and of their general ability to carry out a conversation in English. Second, we wanted to follow up on some of the specific information obtained through the language use questionnaire. The third objective was to obtain a sufficient sample of speech from each student to permit us to formulate specific questions to be investigated under more controlled conditions.

All students were interviewed in pairs by two investigators. There was a list of questions which were asked alternately of each student, in a manner as "conversational" as possible. The questions concerned such things as the students' family name, age, siblings, and favorite television programs in English. The interviews, which lasted about 10-12 minutes, were recorded and fully transcribed. A sample of speech was thus obtained from each learner and information obtained on the language use questionnaire was confirmed and expanded.

Picture Card Description Task

This oral interview activity was designed to elicit specific features of English which had been identified as problem areas in preliminary analysis of data from classroom interaction and the first interview. In this task, each student had to describe pictures in such a way that the interviewer could choose a duplicate of the picture being described from an array of four pictures which were very similar in most respects. The task was treated as a game and students appeared to enjoy it. Substantial samples of essentially spontaneous speech were obtained from students at all three grades. The speech samples obtained have been partially analyzed for the study of patterns of variability, but they are a resource for a number of further investigations of learners' language.

Grammaticality Judgement Tests

The production data from the classroom interaction and interview transcripts need to be compared with data on comprehension and linguistic intuition. The grammaticality judgement tests are designed to obtain data of the latter kind. In these tests, students are required to judge whether written sentences are "correct" or not. Sentences judged "incorrect" are to be corrected.

In the first year of the study, grammaticality judgement tests were used very successfully in the investigation of students' knowledge of specific linguistic structures. The results are also being analyzed in a study of the long- and short-term effects of specific instruction on learners' performance on this kind of test.

Standardized Tests

Before undertaking the study, we had assumed that standardized tests appropriate for the age ranges being studied would be available. This has not proved to be the case. Most existing measures seem to have one or more of the following flaws: (1) they have not been standardized; (2) test items lack validity; (3) administration instructions are unclear; (4) scoring protocols are unclear; (5) the standardized tests which do exist take several class periods to administer; (6) test items do not simulate normal uses of language; (7) semantic content is virtually absent or inappropriate for all or some of the age groups; (8) cultural content is inappropriate for Quebec students.

The problem of tests which permit comparisons of our subjects with other ESL learners has been particularly acute for the Grade 8 learners. Grade 6 and Grade 10 students were given province-wide exams at the end of the year. We have made arrangements to have access to these results when they are available in August 1978.

One test widely used in university level ESL courses is the CELT (Comprehensive English Langauge Test, Harris and Palmer, 1970). In order to determine whether this test was appropriate for the Grade 8 and Grade 10 classes, the Structure and Listening tests were piloted on Grade 9 and Grade 11 students from the same school as the observation classes. We did not administer the third test, a vocabulary test.

The Grade 11 pilot group performed as well on the listening test as the group of French-Canadian university students which Harris and Palmer used as one of the "Reference Groups". They performed somewhat less well than that group on the structure test. The Grade 9 students performed significantly below chance on both tests. Given the results of the CELT with the Grade 9 pilot group, we did not administer the CELT test to the Grade 8 observation classes. However, the listening and structure tests were administered to the Grade 10 classes early in March 1978. A summary of the results of the CELT is presented in Table 1. For purposes of comparison, the results for the Grade 11 pilot group and the French-Canadian Reference Group are also included.

Table 1

CELT: Mean Scores and Standard Deviations for Grade 10 and Comparison Groups*

	10a		10b		11p		Ref	
	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S
Structure	43.8	21.8	24.2	7.5	49.8	18.3	64.3	21.0
Listening	65.8	14.4	38.9	10.6	72.9	13.8	75.7	19.2

Note: 10a: N=25 (structure); N=24 (listening)
10b: N=23 (structure); N=24 (listening)
11p: N=32 (structure); N=23 (listening)
Ref: N=122

*Mean scores are per cent scores.

It should be noted that both our Grade 11 pilot group and the French Canadian Reference Group represent self-selected populations in that ESL instruction is not mandatory after Grade 10. Therefore, students in the Grade 11 ESL class are there largely by choice and the class is likely to be made up of the more successful learners of English. Students in 10a can be expected to perform as well as the Grade 11 pilot group when the CELT is administered again in the spring of 1979. A large number of 10b students also have stated their intention to continue. A full report of the group and individual differences in the second administration of the CELT after a 12-month interval will be made in the second annual report.

A qualitative analysis of the CELT results is being undertaken in an attempt to account for the fact that there was significant clustering around specific wrong answers on certain items and indeed on whole sections of the test. Meanwhile, the results are being analyzed in comparison with other kinds of data, including the cloze tests and grammaticality judgement tests.

Cloze Tests

Two factors motivated our development and administration of cloze tests: (1) the unavailability or unsuitability of standardized tests (especially for the Grade 8 group) and (2) previous research showing high correlations between cloze tests and other tests of language proficiency.

The construction of a cloze test appears to be simple. Every nth (usually every 7th) word is deleted from a passage of prose and replaced by a blank. Subjects read the passage and fill in words which best complete the passage. Scores are based on the extent to which the words supplied are exactly those which were deleted (or, in an alternative scoring system, other "contextually acceptable" words).

In recent years the cloze technique as a measure of ESL proficiency has been used in numerous studies. Studies by Darnell (1968), Kaplan and Jones (1972), Stubbs and Tucker (1974) have shown this technique to be highly reliable. Swain, Lapkin, and Barik (1976) used the cloze technique with bilingual children in order to measure both first and second language proficiency. They found it to be "...a valid and reliable means of measuring second language proficiency."(p.40)

In previous research, cloze tests have been found to correlate highly with standardized ESL proficiency tests and they appear to correlate even better with other pragmatic testing procedures which require the skill of listening comprehension (Darnell, 1968; Oller, 1972).

In spite of the apparent ease with which cloze tests are constructed, there are some problems related to the use of cloze procedures. One of the problems which we encountered was that of determining whether a passage could be considered to have an appropriate level of difficulty for our subject population.

According to most research, the level of difficulty of the passage does not greatly affect the spread of the scores. However, some sense of the level of skill of the students is necessary and thus the judgement of content difficulty becomes a subjective one (Oller, 1972; Aitken, 1977). We found that the determination of the level of difficulty was the most difficult and time-consuming aspect of the construction of the cloze tests which we used. Basing the choice of a passage on the readability formulas usually used did not seem to be satisfactory. This is due in part to the fact that most readability formulas use the number of long words as one of the criteria for determining the difficulty of a passage. However, it happens that words of three or more syllables are often

French-English cognates. Since our subjects are native speakers of French, we cannot consider these words as "difficult". Therefore, the readability formulas could be used only as a starting point when choosing an appropriate text for a cloze test. We felt it was also necessary to exercise some subjective judgement of the level of difficulty and to pilot the cloze passages extensively before administration to the observation groups.

In order to choose an appropriate passage for our Grade 8 and Grade 10 classes, we constructed two cloze tests of apparently equal difficulty. These were then piloted on a small sample of subjects and administered to our two Grade 10 observation classes. Half the subjects in each class were given one test and the other half the other test. Overall, the scores were too low to discriminate among students. Furthermore, the results indicate that, although the readability level was the same for the two texts, one test was much more difficult than the other.

We therefore selected and adapted another passage and piloted it extensively before administering it to our Grade 8 and Grade 10 observation groups.* The pilot groups consisted of 63 Grade 8 and Grade 10 francophone students. Results of the pilot administration indicated that this passage was at an appropriate level of difficulty as it discriminated well among the pilot subjects. This passage had a Flesch readability score of 92 ("very easy for native speakers). The FOG formula ranked it as appropriate for Grade 5 native speakers. The passage was 375 words long. The first and last sentences were left intact. Every seventh word was deleted, leaving 50 blanks in all. Proper nouns were excluded from the count.

Administration and scoring. The task was administered by the ESL classroom teachers who made sure that the subjects

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*Lili Ullmann developed and scored this final cloze test.

understood the procedure. Students had approximately 45 minutes to complete the task.

There are various ways of scoring a cloze test, the easiest being the exact word method. This consists of counting the number of blanks filled with the same words as the original text. Some researchers, however, have felt that the exact word method is too rigid for non-native speakers and have experimented with other scoring systems. One of these is the contextually acceptable word method, in which any work that is acceptable in the context of the passage is marked correct. We scored our cloze test by both the exact word and the contextually acceptable word method and calculated the rank order correlations between the two sets of scores. These correlations being very high (.99 and .96 for the two Grade 8 classes; .97 and .96 for the Grade 10 classes), we judged that there was no reason to prefer the more laborious contextually acceptable word method to the exact word method for purposes of comparing cloze test scores with other tests. Nevertheless, the contextually acceptable method and the examination of frequent errors gives insights into learners' language development.

The mean scores for the four secondary classes are presented in Table 2. The cloze test, for Group 10a, had a fairly high reliability coefficient (calculated by the Kuder-Richardson 21 formula) of .82. We may conclude, then, that for this group of students, it was a fairly accurate instrument for measuring whatever cloze tests measure. We intend to investigate this in greater detail.

Table 2

Cloze Test: Mean Scores (out of 50)

	Exact	Acceptable
8a (N=30)	20.3	22.4
8b (N=23)	16.9	18.4
10a (N=22)	29.7	33.3
10b (N=22)	16.1	17.8

Correlations across Measures

As part of the preliminary analysis of the data yielded by the measures discussed above, we calculated rank order correlations across the close test, CELT-listening, CELT-structure, and the grammaticality judgements test for Group 10a. (This was the only class where the CELT scores were high enough to permit comparisons.) The correlations are reported in Table 3. All are significant at the .01 level, except that between the close and the CELT-listening tests which is significant at the .05 level.* However, the relative size of the coefficients did not confirm our expectations.

Table 3
Correlations across Measures for Group 10a

	Cloze	CELT (list.)	CELT (stru.)	Gramm. judg.
Cloze		.47	.63	.70
CELT-listening	.47		.71	.57
CELT-structure	.63	.71		.63
Grammaticality judgements	.70	.57	.63	

Note. N=21

We expected the strongest relationships to obtain between the two measures focusing on form, the CELT-structure and the grammaticality judgement tests on the one hand, and on the other, between the two tests measuring a broader range of linguistic abilities, the cloze test and CELT-listening. This expectation was based in part on previous research which suggests that the

*Because of the size of the population, however, these figures must be interpreted with caution.

cloze is more strongly related to tests of global language ability than to discrete point grammar tests. For our subjects, however, the cloze showed the strongest correlations with the grammaticality judgement test, while the two CELTs correlated most strongly with each other. (This latter correlation is in about the same range as the figures reported for the reference groups in the CELT literature.) Further quantitative and especially qualitative analysis of the data from all four measures, as well as from the picture description task may shed some light on this.

Additional Data

Additional data resources which will be analyzed along with the classroom interaction data and the data described above include:

-students' written summaries of classroom dialogues which were created by the students and performed in class. The dialogues themselves are part of the classroom interaction data.

-provincial and school boad examinations. Arrangements have been made in some cases to obtain not only the students' scores, but their answer sheets as well so that a qualitative analysis can be performed.

-class tests devised and administered by the teachers.

Accounting for Variation in L2 Learners' Language*

The purpose of this study is to trace the development of a group of English language structures in the speech of francophone ESL learners and to describe and account for the observed variation in learners' performance on these structures under different conditions. This paper is a progress report based on cross-sectional research undertaken during the first year of the study. However, future reports will be based on the continuing longitudinal study.

Variation in Language Acquisition

An underlying assumption of the study is that some previous research suggesting that there are "universal sequences" in linguistic development has masked important variation: (1) variation across groups and individuals, and (2) variation in the performance of an individual or an apparently homogeneous group under different conditions of performance.

The first kind of variation has been treated in much recent research on second language acquisition. This kind of variation has been attributed to several factors in research findings which suggest that individual learners respond differently to the same linguistic environments. Individual variation in L2 performance has been attributed to cognitive style (Brown, 1973), interaction style (Seliger, 1977), previous language learning experience (Bialystock & Fröhlich, 1977), age or developmental

* This progress report was prepared by Patsy Lightbown, Nina Spada, and Robert Wallace. We thank other members of the project team for their participation in the administration and transcription of the picture description task. We thank especially Bruce Barkman, Gerard Bates, Phyllis Vogel, and Lise Winer.

stage (Krashen, 1973, 1975; Rosansky, 1975), etc.

The focus of this study is on the second kind of variation, that which can be observed in the performance of individuals or homogeneous groups under different performance conditions. A number of researchers have reported differences in learners' ability to use the same linguistic structures on different kinds of tasks (e.g., Krashen, Sferlazza, Feldman, and Fathman, 1976; Larsen-Freeman, 1975; LoCoco, 1976). Other researchers have reported variation over time in performance under what appear to be the same conditions, pointing out that changes do not always reflect steady improvement, and in some cases appear to be unsystematic (e.g., Bertkau, 1974; Hakuta, 1974; Rosansky, 1976a, b). Hakuta (1974), among others, has suggested that this apparent fluctuation is due to the learner's having first learned correct structures by rote (even in a completely natural "untutored" setting) and then beginning to make errors as he comes to analyze and recombine linguistic elements previously used as rote-learned chunks.

The best known explanation for variation in L2 learners' under different conditions is the "monitor model" proposed by Krashen (1977). According to this model, performance under conditions of "focus on communication" will reflect "natural" or "acquired" competence in the language. That is, in conversation or rapid writing, the speaker will not have time to recall "learned" rules of the language and will instead use rules which have been internalized through unconscious acquisition mechanisms. Conversely, conditions in which the learner believes it is important to take his time and speak or write as correctly as possible, some learners can "monitor" their

by applying consciously known rules. In the "monitored" speech condition, the learner's language will reflect "learned" competence, and the "natural" or acquired sequences of development may not emerge. The reason the learned competence cannot affect the "natural" sequence under conditions of "focus on communication" is that, for Krashen, conscious learning appears to be entirely discrete from and to have no effect upon unconscious "acquisition".

According to Krashen's "monitor model", there is great consistency across learners in the "natural" sequences of development revealed in learners' "unmonitored" language. Variation, he says, is introduced by learners' attempts to modify their language according to consciously known rules. According to the monitor model, one would expect differences in performance under different conditions but consistency within a given task at a particular point in linguistic development. That is, one would expect the "acquired" system to emerge in a "communicative setting" (e.g., the oral interview) and to be altered by "learned" knowledge in a more formal task (e.g., grammaticality judgement)*. Larsen-Freeman's (1975) results showing differences between performance on the Bilingual Syntax Measure and tasks involving reading and writing have been explained in terms of the monitor model (Krashen, 1977).

The notion of "natural" sequences in Krashen's model, is based to a large extent on "morpheme studies" in which the relative accuracy of performance on a group of grammatical morphemes has been observed and described in the speech of L1 and L2 learners. What has been reported in most of these studies is a highly consistent pattern of development across L1 learners on the one hand and L2 learners on the other hand. There have

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* In his most recent work, however, Krashen (1978) has suggested that the "natural" or "acquired" system will dominate under all conditions short of a highly formal discrete-point test of grammar.

been reports of variation in these so-called "natural sequences" (see e.g., Hakuta, 1974; Rosansky, 1975). However, there has been little attempt to try to explain the observed variation in L2 acquisition even though patterns of variation are a major focus of research in other areas of linguistics and sociolinguistics, and in L1 acquisition (e.g., Bloom, Lightbown, Hood, 1975; Cedergren & Sankoff, 1974; Fasold & Shuy, 1975; Labov, 1969).

The design of the present study involves observation and description of consistency and variation in learners' performance on the same linguistic structures under different conditions. The different conditions include different tasks which require different degrees of concentration on linguistic form or on the communication of information. In this progress report, preliminary analysis of learners' performance on two tasks will be presented: (1) an oral communication task involving picture description and (2) a grammaticality judgement task. Analysis of the data obtained through these tasks involves (1) a determination of the extent to which observed variation is systematic and, (2) the proposal of hypotheses to account for the observed variation. These hypotheses will then be tested in the second year of the study, both through further analysis of data already collected (including classroom interaction) and through the administration of further tasks under more controlled conditions.

Linguistic Structures to Be Investigated

The linguistic structures to be considered in this progress report were chosen after preliminary analysis of classroom interaction and interview data.

(1) be (rather than have) form used in referring to age, e.g, He is 16 years old.
(2) the 5 "s morphemes"
    (a) plural - e.g., two trees
    (b) possessive - e.g., the boy's hat
    (c) 3rd person singular - e.g., He walks fast
    (d) copula - e.g., She's tall
    (e) auxiliary - e.g., The girl's playing ball
(3) prepositions indicating motion toward a goal, e.g., The're going to school.

These three structures or groups of structures, are sources of continuing difficulty for ESL learners. They have been chosen as the focus of this study for different reasons.

Be/have. The study of the be/have contrast permits us to trace the development of a structure which, although superficially very easy to teach and explain, remains a frequent problem in the speech of francophone learners of English and, incidentally, of anglophone learners of French.

The theoretical importance of this study lies in its relation to controversy regarding the role of L1 interference in L2 learners' language. It has been proposed, for example, that L1 interference decreases in importance as the L2 learner becomes more proficient. Yet the persistence of this easy-to-state rule in the speech of fluent speakers is striking.

{s} morphemes. The study of the {s} morphemes makes it possible to compare the English L2 development of francophone learners in Quebec schools with that of learners from other L1 backgrounds whose development of {s} morphemes (as well as other grammatical morphemes) has been described in many recent studies

(e.g., Bailey, Madden, & Krashen, 1974; Dulay & Burt, 1974a, b; Larsen-Freeman, 1975; Rosansky, 1976). These studies have reported a high degree of consistency among L2 learners of different L1 backgrounds in the sequence of acquisition of a number of grammatical morphemes. For {s} morphemes, this "natural" sequence is:

$$\text{COP} \rightarrow \begin{Bmatrix} \text{plu.} \\ \text{aux.} \end{Bmatrix} \rightarrow \begin{Bmatrix} \text{3rd} \\ \text{poss} \end{Bmatrix}$$

(Arrows should be read as "precedes". No sequential relationship is predicted for the pairs of morphemes within braces)

The theoretical importance of the {s} morpheme study lies in the fact that major current theories of L2 learning and L2 performance - including Krashen's monitor model - are based on what are believed to be universals in morpheme acquisition.

The use of the {s} morphemes in English often creates problems for second language learners. In the first place, there are three allomorphs of the morpheme, and the learner must learn the phonological rules for the /s/, /z/, or /ɔz/ allomorph. Both L1 and L2 acquisition research have established that the "short plural" (i.e., the /s/ and /z/ allomorphs) are acquired earlier than the "long plural" (i.e., the /ɔz/ allomorph) (see Berko, 1959 and Brown, 1973 for L1 and Dulay & Burt, 1974a and Natalicio and Natalicio, 1971 for L2). This difference among allomorphs for the plural appears to hold true for the other {s} morphemes as well and the presentation of items in the new grammaticality judgements task will be balanced for this feature.

Even more complex than the phonological variants, are the multiple functions of these forms since the same forms serve five different grammatical functions.

Learners frequently fail to supply an {s} morpheme where one is required, and they tend to supply one in contexts where it does not belong so that they produce sentences such as "It's means the students can't go" or "The girl she's have a red dress". The absence of the morpheme where it is obligatory may be explained in terms of several factors. It could be due to the learner's confusion about the function of the /s/ which is often redundant, and not essential for communication.

Another explanation is one based on phonological interference from the speaker's L1. The francophone L2 speaker may know the morpheme is there, but fail to produce it because he is carrying over a (general) rule from French which says that final consonants are usually not pronounced.

A further phonological consideration is that {s} morphemes are sometimes "lost" in the stream of speech. It seems safe to say that {s} morphemes can be missed in oral speech. Indeed it is impossible to hear the {s} morpheme as a separate element when sentences such as those below are produced at a normal rate and with normal stress.

It's snowing today in Vancouver.
He's sometimes very shy.
My sisters spent the year in France.

Locative prepositions. Prepositions are difficult to explain and teach because the choice of the correct preposition is often determined not by a specific rule but by idiomatic expressions, for example, in sentences such as "He's going to the airport" vs. "He's leaving for the airport". Here, as with the be/have contrast, there is considerable evidence that interference from French complicates the already difficult rules for

prepositions in English, leading to sentences such as "the children are going at school" (Les enfants vont à l'école).

The evolution of learners' use of locative prepositions is important precisely because of the fact that rules for their use cannot be adequately taught through explicit instruction. This provides a contrast with the be/have structure, for example.

In French, the prepositions to, in and at can take the same linguistic form à to express different functions (e.g., Il est à l'école; il va à l'école). In the first example, the preposition à is used to express a state which is static. In the second, the preposition à is used to indicate motion toward a goal. Conversely, "to" in English may be translated into French as à + article, en, vers, pour, etc. Prepositions simply do not lend themselves to straightforward translation or simple rule learning.

Preliminary examination of the classroom data revealed some of the difficulties that francophone English L2 learners experience with these locative prepositions. Because they rely on translations from L1 or because of the complexity inherent in L2, they often choose the wrong preposition in their English L2 speech, producing sentences like - "We're going in Robert's cottage" and "We went in four plays and two concerts in New York."

Elicitation of Language Data

The contrasting elicitation procedures to be described below were used in order to permit a comparison of student learners' performance in formal and informal language use tasks. In the grammaticality judgement task, the focus is clearly on form; in the picture description task, the focus in on communication.

Previous research has demonstrated the value of grammaticality judgements for going beyond production data and obtaining information about L2 learners' linguistic intuitions which may confirm or contradict certain aspects of their productive language (Cohen & Robbins, 1976; Hamayan, 1978; Schacter, Tyson, & Diffley, 1976).

We predicted that performance on the picture card task would be similar to that observed in oral elicitation procedures used in other research (e.g., the Bilingual Syntax Measure) but that the grammaticality judgement task would be different. Further, we predicted that a substantial number of subjects would deviate from the group in terms of the accuracy orders for {s} morphemes on both the picture description task and the grammaticality judgements task. Finally, we predicted that obligatory contexts for morphemes occurring in some linguistic environments would be more difficult than those occurring in others - because of overall sentence complexity or phonological environment. That is, the accuracy would not necessarily be uniform for all instances of the same morpheme.

Picture description task.* The picture description task was designed to elicit the linguistic structures specified above by means of a picture card game. This game involves two participants - the student and the interviewer - and is played with ten groups of four cards each. Each card in a group is thematically similar to the other three, but differs slightly in its details. For example, one group of cards has the same stick-figure person in every picture, but the person is engaged in a slightly different activity in each (e.g., holding a box/opening a box while standing/sitting), or the person is wearing different coloured clothing, or is positioned differently in each picture (e.g., inside/outside a vehicle) see Figure 1).

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* Our thanks to Richard Yorkey for drawing the pictures.

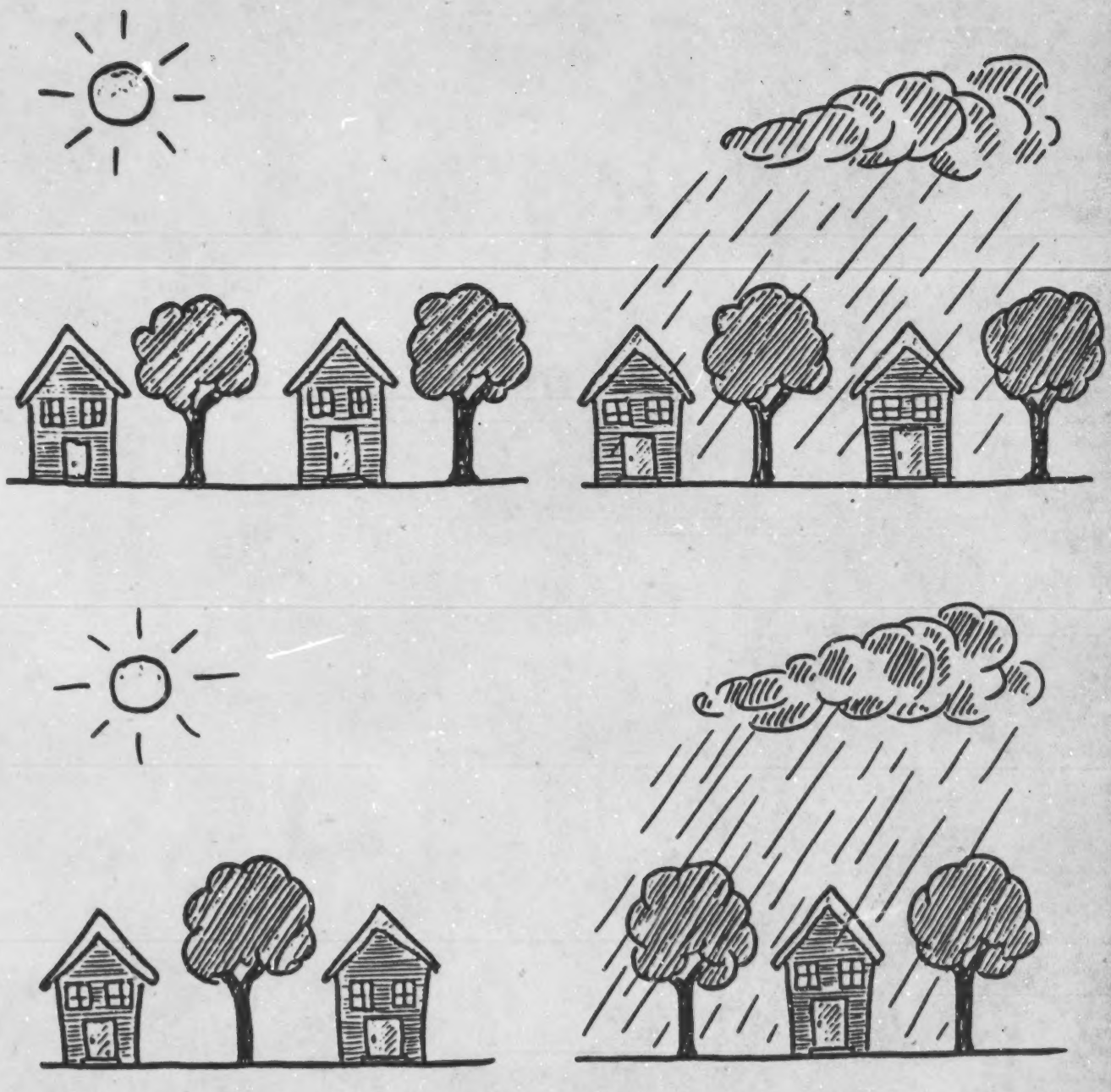

Figure 1. Example of contrasting pictures used in picture description task.

Each group of pictures was designed to elicit specific linguistic items (e.g., plural, copula). The interviewer has two sets of cards. One set is arrayed, one group at a time, before the interviewer on a rack, so that it is impossible for the student to see them. The duplicate cards of the same group are presented face down to the student. The procedure for the administration of the interview is as follows:

1. The student is asked to select one picture card from a group of four. The interviewer does not see which card has been selected.
2. The student describes the picture to the interviewer who can refer to the duplicate group of cards in front of him.
3. From the student's description, the interviewer guesses which card is being described and verifies his choice by matching his card with the student's.

The development of such screen tests can be traced to earlier studies in psychology investigating cognitive development and communication skills in children (Glucksberg, Krauss & Weisberg, 1966). Upshur (1971) designed a similar picture card game which he refers to as a "communication task", for testing second language proficiency. In his efforts to develop tests which go beyond the discrete-point grammar test approach and measure instead successful productive communication, these "communication tasks", which allow for a "correspondence between the intentions of a speaker and the concept created by his audience" were designed.

Our picture card game, although similar in design, differs in its objectives. In Upshur's model, the scoring system is based solely on successful communication, that is, the student's

performance is evaluated in terms of the interviewer's ability to guess which picture is being described. Furthermore, the test is usually timed as Upshur found that it did not discriminate among students when no time limit was set. That is, even weak students were eventually successful when no time limit was imposed. It is precisely this quality, however, which made the task ideal for our subjects, many of whom are at very early stages of ESL development. Because few specific questions were asked, a wide range of utterances and utterance types were used to describe these pictures. Nevertheless, there were certain structures which had to be produced in order for "successful communication" to take place. For example, one set of pictures showed a little girl holding balloons of different colours. No matter what else the student said about the picture he described, he was obliged at some point to refer to the balloons, that is, to use a noun plural - correctly or incorrectly.

Thus, our task was not based on the interviewer's ability to guess the right picture. Rather, the interviewer sought to encourage the student to talk as much as possible. Where appropriate, the interviewer would sometimes deliberately guess wrong in order to get the student to say, for example, "In your picture the man is holding the box. In my picture, the box is on the table". Similarly, the interviewer might select a second picture from the same group of cards after having guessed the first picture correctly. This second picture would be selected with the purpose of eliciting another language feature which was not elicited by the first. Or, students might be asked to contrast different pictures in each group of cards.

All students received instructions for the task as they began the interview. Students were shown one group of pictures so that

they could see how closely the pictures resembled one another. The "rules of the game" were quickly understood by all students. Each student took approximately ten minutes to complete all ten groups of pictures. In a very small number of cases, students who found the task too difficult were given fewer pictures to describe. An important advantage of the picture card game was that the same pictures can be used for learners' at different levels of language proficiency. The same picture which elicits a simple response such as "two trees", can also elicit a more complex utterance such as, "There are two identical trees which are standing beside two identical houses".

During the interview, it was important to allow the students enough time to formulate their descriptions. Long pauses of silence sometimes followed questions such as "What can you tell me about your picture?", "What else do you see?", or "Is there something else you can tell me?" In order to avoid simple imitation and repetition in the students' performance, specific questions were used only when a student was having great difficulty in describing the pictures. A list of suggested questions was provided for all interviewers to be used as a guideline for the target structures. The interviews were recorded and fully transcribed for subsequent tabulation and analysis.

Grammaticality judgements. In the grammaticality judgement test, students were required to distinguish between correct and incorrect uses of {s} morphemes, the be/have distinction in expressing age, and locative prepositions in a set of written sentences and to correct the incorrect uses. We predicted that ability to do so would not necessarily imply ability to produce these structures correctly in classroom interaction or interviews. We also expected that the relative difficulty the different

structures presented would vary amongst individuals; that is, we did not expect that the students' ability to make correct grammaticality judgements would necessarily conform to the universal acquisition orders for which claims are made in the literature. Finally, we predicted that the ability of a given individual to make correct judgements as to the grammatical or ungrammatical use of a given structure would vary according to certain features of the linguistic context in which the stucture occurred, and we hoped to gain some insights into the factors involved in this variation, insights which would allow us to formulate specific hypotheses to test in the next phase of the study.

Because we are carrying out a related study* to examine the effects of instruction on the ability to make correct grammaticality judgements, the test was administered to our subjects twice, the second administration coming two days after the first. The class period between the two administrations was devoted to a review of the grammatical structures in question, using a set of sentences similar to the test sentences. The resulting change in the performance of our subjects was compared to the change in the performance of control goups of francophone students at corresponding grade levels. The test was also administered twice to the control groups at the same interval, but without the intervening session of instruction. We intend to administer the test a third time in the fall to measure the permanence or otherwise of the effect attributable to instruction. We expect, of course, that the effect will prove to have been temporary.

The test consisted, for the secondary students, of 50 sentences, each of which contained at least one correct or incorrect use of a target structure. Some of the sentences used

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* The Effect of Instruction on the Performance of Child, Adolescent, and Adult ESL Learners. Paper accepted for presentation at the Los Angeles Second Language Acquisition Research Forum, October, 1978.

more than one of the target structures, but none contained more than one error, a fact of which the students were made aware. There were nineteen correct sentences. The breakdown of the errors in the other 31 was as follows:

4 auxiliary /s/
4 copula /s/
6 third person singular /s/
3 plural /s/
5 possessive /s/
4 locative prepositions
5 have vs. be

Students were instructed to write "C" in the blank beside the sentence to indicate a correct sentence; if they judged the sentence incorrect, they were to circle the error and write the correct word in the blank, e.g., "She usually (make) many mistakes in her homework. makes". Errors were of three types: omission (Her new watch very expensive), use of the wrong form (I am going in France), and inappropriate use or overuse (It's makes no difference what you do, There's are some peanuts in the bowl). A similar but somewhat easier 20-item test was administered to the Grade 6 students. It included no items on locative prepositions, and the sentences were generally simpler. Both tests were piloted on groups of francophone students at appropriate grade levels.

Results: Picture Description Task

The analysis of the data elicited by the picture card task is just beginning. We have not yet examined the results from all our subjects. However, we have tabulated both the individual and group results for one class at each of the three grade levels. This section will report on the preliminary analysis of the group data compiled thus far. Individual performance data will be analyzed as the study continues.

Preliminary analysis of the data for the secondary student reveals a difficulty order of morpheme acquisition which is similar to the "natural" order of acquisition observed and reported in other morpheme studies (COP → AUX → PLU → 3rd P). The order for the elementary students differs from other studies in that the accuracy for the 3rd person (63%) was higher than for the plural (52%) (see Figure 2) making the difficulty order COP → AUX → 3rd PERSON → PLURAL. This difference may be partly explained by the fact that there were 316 obligatory contexts supplied for the plural and only 29 for the 3rd person which students may have produced correctly by rote.

We were unable to include the possessive {s} morpheme in our analysis because the picture card task did not elicit enough instances of the possessive for quantitative analysis. However, in reading the transcripts, one notices that subjects often used the of possessive construction (analogous to the French construction) in contexts requiring the possessive. For example, in one picture, there is a boy pulling a cat's tail. Many students, when describing this picture, said "He's pulling the tail of the cat". Thus no obligatory context for the possessive marker was created, even though possessive function was intended.

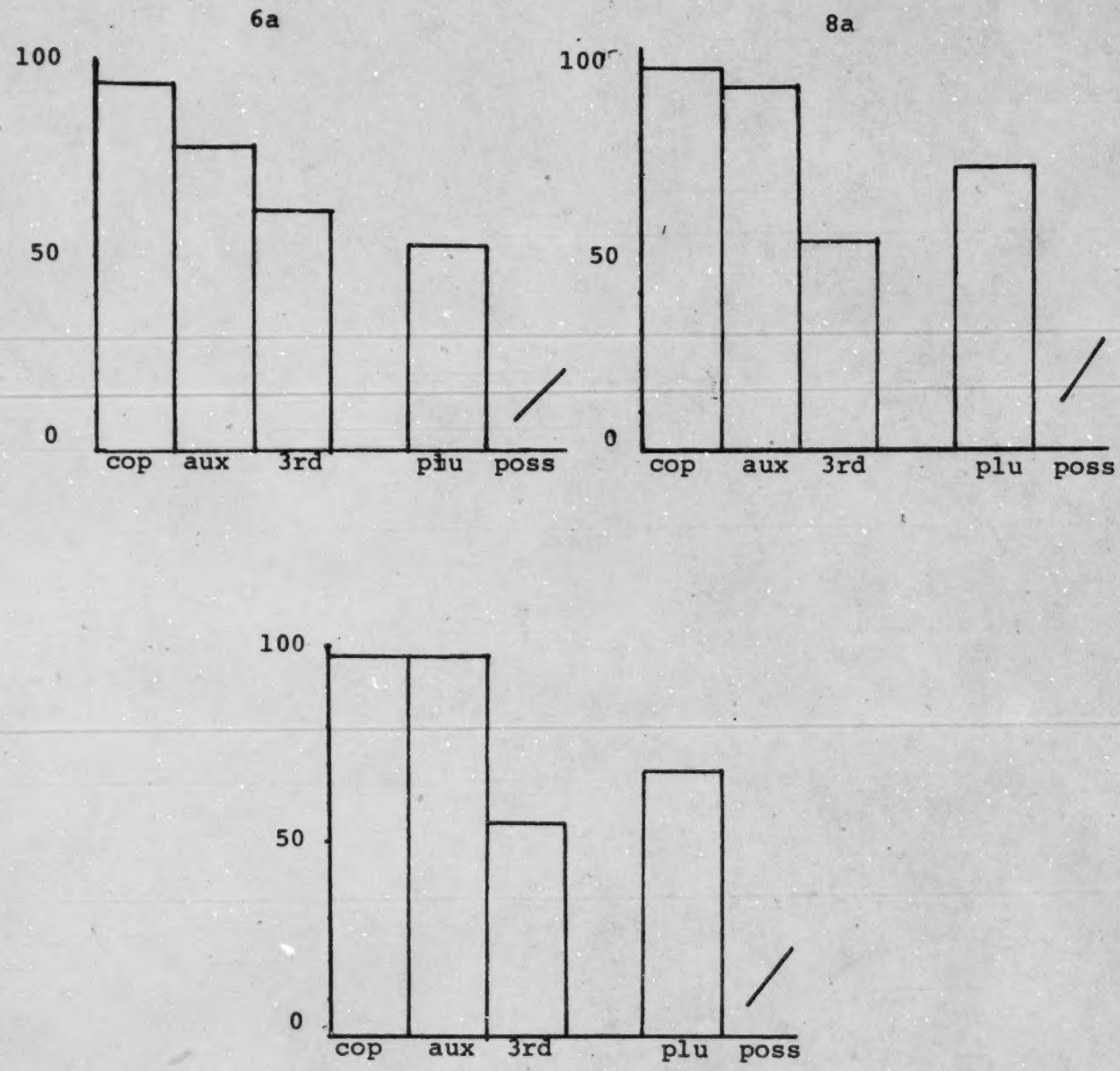


Figure 2. Group performance on {s} morphemes in picture description task. Height of bar represents percentage of correct use in obligatory contexts.

Although the order of difficulty in our preliminary findings parallels the order obtained in other morpheme studies, there remains a large body of data that has yet to be accounted for and requires further and more detailed analysis. These data contain a large number of uninflected verb forms occurring with 3rd person singular subjects. Most of these forms occur in contexts which call for a progressive form (auxiliary + -ing). Even though the accuracy for the auxiliary is high for secondary subjects, there is a high frequency of uninflected forms in both secondary groups. Further research is required to account for these uninflected forms and determine at what stage they occur relative to the -ing and -s inflections. It may be, for example, that learners first learn cartain verbs with -ing inflections, treating the -ing form as the base form of the verb. Other verbs may first be learned in their base uninflected form or with the -s inflection. In the three classes whose performance on the picture description task is presented here, the greatest proportion of uninflected forms occurred in the 8a subjects; the greatest proportion of verb + -ing (with or without auxiliary) occurred in the 6a subjects (see Table 4).

Table 4

Inflected and Uninflected Verbs Used in Picture Descriptions

	6a	8a	10a
Verb + -ing	96	56	142
Verb + s	18	80	109
Uninflected	21 (16%)	82 (38%)	77 (23%)

These results suggest that learners do not begin by using uninflected verbs and then proceed to acquire inflections. Rather, the uninflected form may represent some intermediate stage between the use of rote-learned inflected verb forms and the acquisition of a system of inflection.

Another result requiring further investigation is the overuse of the {s} morpheme in cases such as "He's takes a cookie" and "She's have a red dress". It is not clear whether these forms should be considered as either third person or auxiliary. One current hypothesis is that, due to the inordinate amount of time spent practicing copula and auxiliary forms, students treat pronouns with 's contractions (it's, he's, she's) as alternate forms in free variation with the pronouns. Continued longitudinal examination is required to trace the development of these forms to determine whether the overuse is systematic and where it occurs in the developmental sequence.

It is interesting to compare the accuracy rates for each of the {s} morphemes across groups. All three groups perform at a high level of accuracy for the copula, and the secondary groups show similarly high rates of accuracy for the auxiliary. A finding which is interesting and deserving of further investigation is that the 10a subjects perform no better than 8a subjects on the plural. However when long and short plural are treated separately, there is evidence for developmental progress in the acquisition of the plural. Subjects in the 10a group provided the long plural correctly in 35% of the contexts whereas the accuracy for the 8a group was 18%.

Results: Grammaticality Judgement Test

Both the 20-item and 50-item grammaticality judgement tests functioned well as tests. Item analysis of the results of the first administration showed that all items discriminated among the subjects. However, on the 50-item test, the nineteen items which did not contain an error tended to have very high facility values and low indices of discrimination (none greater than .25). The items which required students to correct an error discriminated better on the whole; only 8 of 31 such items had a discrimination index of less than .25, and these 8 were items with extremely low facility values. In other words, considered as test items, the sentences without errors were too easy, while the sentences with errors were mostly satisfactory, with a minority being too difficult. This pattern was also observed in the 20-item test. The reason for it is fairly obvious, and has important consequences for the design of grammaticality judgement tasks. It is simply that in the case of the ungrammatical sentences, students not only had to determine that they were ungrammatical, but to correct them. Hence, if a student were in any doubt on an item he might choose the easiest solution - to mark it correct. The high facility values for the errorless items are clearly owing in large part to this biased guessing. In the next phase of the study, we intend to overcome this problem by dividing the task into two tasks. In an initial test, students will be asked only to judge the sentences grammatical or ungrammatical. These tests will be marked and returned to the students who will then have only to correct those sentences identified as ungrammatical.

The reliability of the tests, according to the Kuder-Richardson formula, was high: .89 for the 50-item test on the first administration, .90 on the second administration. The

corresponding figures for the 20-item test administered to the sixth grade were .85 and .86.

Table 5 shows the mean scores of our Grade 8 and Grade 10 subjects and of their control group peers on the two administrations. (The scores of the two Grade 10 subject groups, 10a and 10b, are displayed separately because of the big difference in their performance.) Grade 10a is an "enriched" stream and 10b is considered a "regular" stream. The average scores for 10b were actually lower than those of the Grade 8 subjects.

Table 5

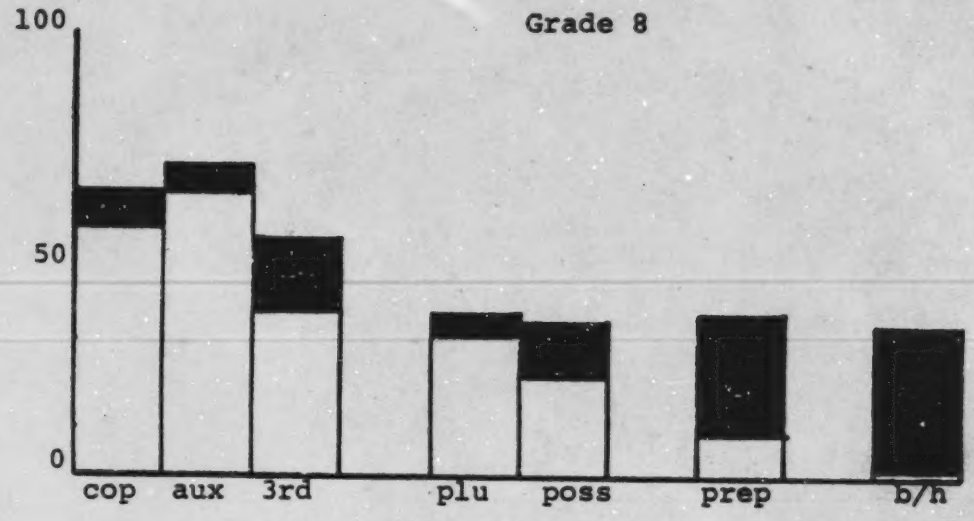
Grammaticality Judgement:
Mean Scores (out of 50)

	Administration		
	First	Second	Difference
Grade 8 subjects (N - 51)	26.1	31.8	5.7
Grade 8 controls (N - 45)	27.2	28.9	1.7
10a subjects (N - 21)	35.8	40.1	4.3
10b subjects (N - 21)	22.3	28.8	6.4
Grade 10 controls (N - 21)	34.0	34.2	0.2
ALL SUBJECTS (N - 93)	27.5	33.0	5.5
ALL CONTROLS (N - 66)	29.3	30.6	1.3

Our subjects improved between administrations on the average more than four times as much as the controls, a difference which can only be attributed to the intervening period of instruction. The lowest-scoring group of subjects, class 10b, benefited the most from this instruction, while the highest-scoring group, class 10a, showed the least benefit. Where the benefit was

greatest, it was also least uniform among individuals. The rank order correlation between the first and second administrations of the test was only .60 for class 10b, compared to .83 for 10a and .86 and .79 for the two Grade 8 groups. But as a group, 10b improved more uniformly on the various structures than did 10a, as may be seen in Figures 4 through 5 . Over three-quarters of the total improvement by 10a was acounted for by improvement on the be/have distinction. These differences may, of course, have been caused by differences in the type of instruction given in the period between the two administrations. No attempt was made to make the teaching uniform from class to class except insofar as the same list of 25 sentences was used as the basis for the review and that all classes at each grade level had their regular classroom teacher. Thus both Grade 10s had the same teacher; both Grade 8s; and all three Grade 6s.

The mean score of the Grade 6 students on the 20-item test was 8.9 for the first administration and 10.3 for the second. If we express these figures as percentages (44.5% and 51.7%), the difference between them, representing the improvement between the two administrations, is 6.9%, compared with a difference of 11.1% between the mean scores of the secondary students on the first and second administrations (54.9% and 66% respectively). Thus the sixth-graders appeared to benefit somewhat less from their period of instruction than did the secondary subjects. However, we do not have control data available against which to compare the sixth-graders' improvement. Figures 4 through 5 show the mean group scores (expressed as percentages) on each of the seven grammatical structures tested. Only those items which contained errors have been taken into account here. The solid portion of each bar represents the difference between the first and second administration.



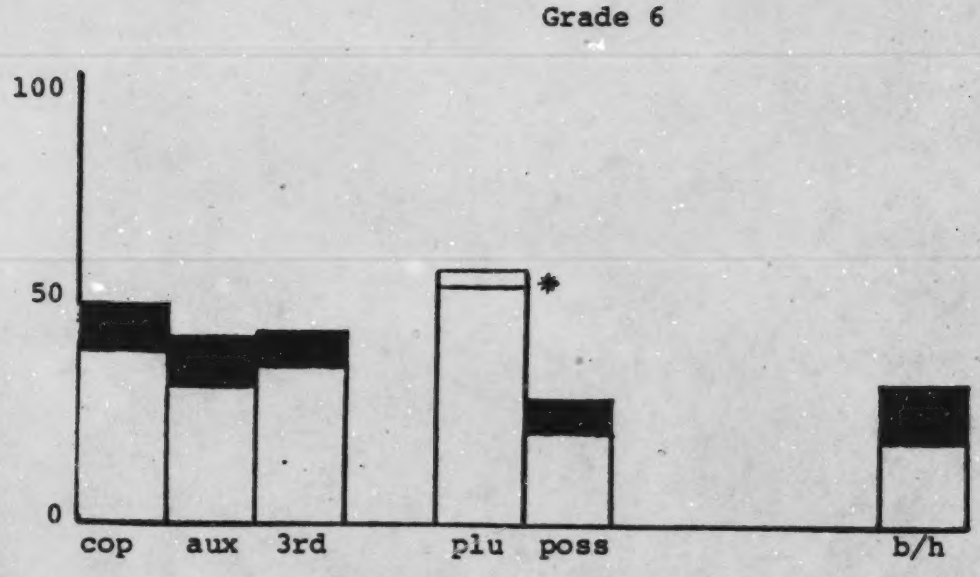
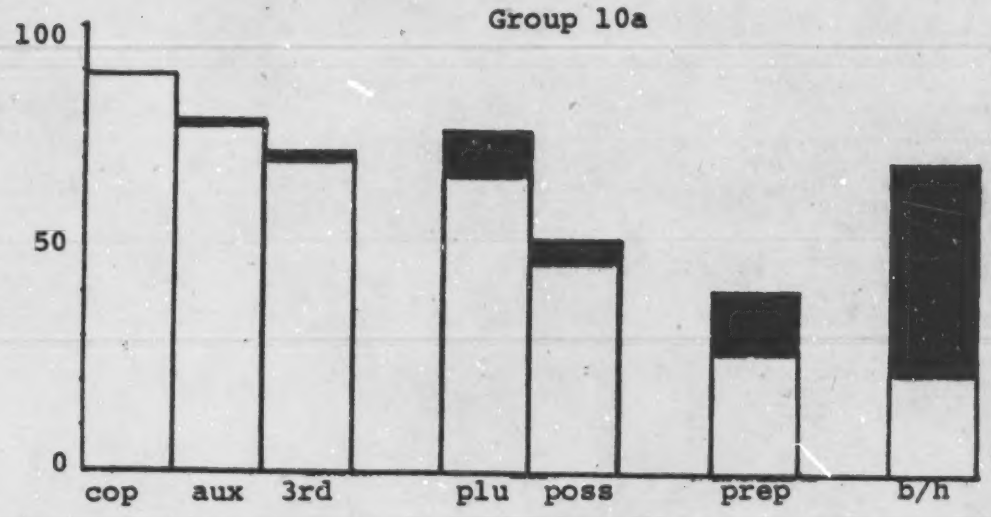


Figure 3. Group performance on grammaticality judgement tests. Height of white bar represents percentage of accuracy on first administration. Black segment represents improvement on second administration. The * indicates a single case of lower score on the second administration.



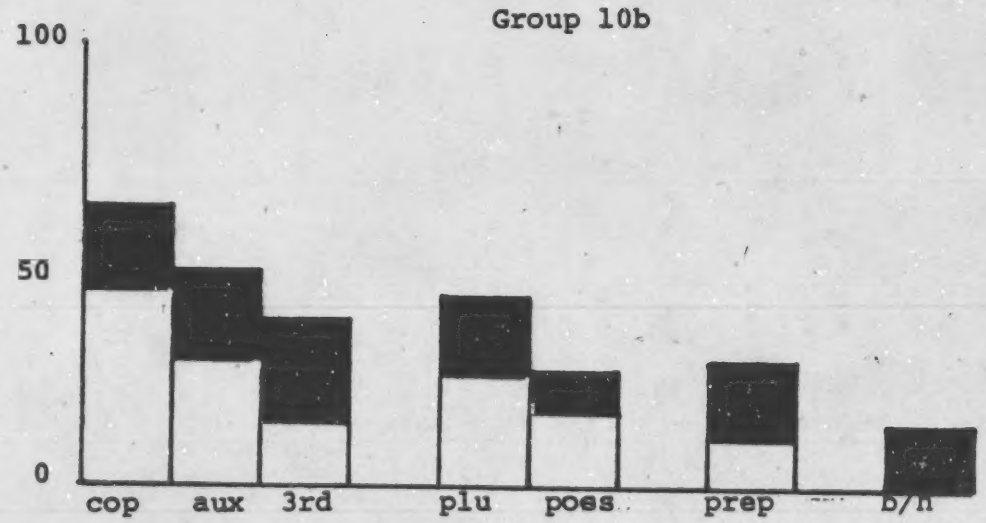


Figure 4. Group performance on grammaticality judgement tests. Height of white bar represents percentage of accuracy on first administration. Black segment represents improvement on second administration.

The order of difficulty of the various structures generally accords with the "acquisition orders" described in the literature. One interesting anomaly is that the performance on the auxiliary is slightly ahead of the copula for the Grade 8 subjects. The design of the test may also have played a role in producing the unexpected order. Two out of the four items with errors in the use of the copula contained errors of overuse, which gave our subjects more difficulty than errors of omission. If only the items with errors of omission are taken into account (for both copula and auxiliary) then the copula proves less difficult than the auxiliary for all groups, although the scores remain much closer for the eighth grade than for the tenth.

A possible explanation for this finding is that Grade 8 is the level at which the progressive is extensively practiced. Such an explanation seems all the more plausible because it would account for another deviation from the "natural" sequence: Grade 6 subjects performed better on the 3rd singular than on the auxiliary. They had been introduced to the 3rd singular shortly before taking the test. (Note the higher than expected performance on 3rd singular in the picture description task as well. See Figure 2). We have not yet completed our analysis of individual performance on the morphemes. Thus, the extent to which individuals conform to the group orders is not yet known. Because we have only 3-6 examples of each structure for each student, it would be difficult to draw conclusions about orders for individuals. One of the goals of the next phase of the study is precisely to collect enough data on individual students to make such a study possible.

It is possible however to report on a preliminary analysis of the effects on accuracy of different linguistic contexts.

The initial test provided us with suggestive data that have formed the basis of our hypotheses for the next phase. For example, on the first administration, only 28% of the students correctly supplied the missing auxiliary in "The dog plays outside when it snowing", while 81% were able to supply it in "He leaving early today". Now, although the two sentences are not precisely comparable in other ways (the former is obviously more complex than the latter), we may hypothesize that at least part of the difference is due to the initial sibilant in "snowing". It would appear that students judge the grammaticality of sentences initially by "sounding them out"; that is, the first verification takes place in the oral/aural channel and by intuition rather than by proofreading and formal analysis. We plan to test this hypothesis in the next phase of the study by balancing the presentation of items in which sibilants in the phonological environment of the missing morpheme make it difficult to "hear" the sentence as incorrect against those which contain no such difficulties. Another phonological issue to be considered is the relative performance on the different allomorphs of the {s} morphemes. Another aspect of variation which will be investigated is the relative success students have in correctly supplying the verbal {s} morphemes (copula, auxiliary, 3rd person singular) in sentences which differ in terms of pre-verbal complexity.

Work in Progress: Picture Description Task

Continued analysis, both cross-sctional and longitudinal, of individual and group data will lead to a better understanding of performance variation. Further investigation into the overuse of {s} morphemes and uninflected verb forms will continue in an effort to discover how these forms fit into the developmental patterns of morpheme acquisition.

In order to obtain comparable longitudinal data, we will administer an adapted version of the picture description task in Spring 1979. The adaptation is being designed to elicit a wider range of grammatical structures.

Work in Progress: Grammaticality Judgement Test

In order to test the hypotheses derived from the results of the first grammaticality judgement test, a new test has been designed to provide a larger number of items for each grammatical structure and to control for the factors which seemed to account for the variability observed in the performance on the first test. Because of the large number of items needed on the test in order to control for all these variables, the new test focuses on {s} morphemes. Be/have items are included in order to obtain longitudinal data on this structure. Locative preposition items are also included, but including sufficient items to control for the large number of variables associated with the use of prepositions would have made the test excessively long.

Following the test, students will be interviewed in order to provide introspective data on the process of making grammaticality judgements as well as to explore the students' knowledge of the appropriate grammatical rules. By comparing students' performance on the test with their ability to state the formal rules involved and their descriptions of how they proceed to judge grammaticality, we hope to be able to gain some insight into basic second language learning strategies.

The new test is currently being piloted with francophone learners in the Concordia University English Language Summer School and will be administered to the subjects of the ongoing longitudinal study in October 1978.

The nature of the other two structures, "easy" be/have and "hard" prepositions led to the prediction that performance on the easy structure would be better on the formal (focus on form) task than on the informal (focus on communication) task but that there would be no difference in performance on prepositions. The available data and the analyses completed to this point do not permit us to draw conclusions about the use of prepositions under different conditions. The differences between scores on the first and second administrations suggest that students did benefit - at least temporarily - from formal instruction. However there is clearly a much greater increment on be/have following instruction.

Continuation of the Study

The results and analyses of the grammaticality judgement and picture description tasks are preliminary and do not permit confirmation or disconfirmation of our hypotheses. The continuation of this study involves (1) the completion of group comparisons for the other observation groups on the picture card task, (2) comparisons of individual performance on both tasks, (3) analysis of the students' classroom language, (4) analysis of students' written work, (5) testing the hypotheses regarding variation generated by the preliminary results of the study through the use of newly designed elicitation procedures. From these analyses will emerge a clear picture of the course of francophone ESL learners' development of these structures over the period of their ESL instruction in school. Over the period of the study we will be able to integrate the results of this study with the classroom interaction analyses in order to better describe the relationship between second language teaching and learning.

Form and Function of Questions in ESL Learners' and Teachers' Speech*

The study of questions in L2 development is motivated by two considerations. First, question-answer interchange is one of the most frequent activities in L2 classrooms and, as such, it is important for us to know what is happening in these interchanges and how to make best use of it to promote learning. Second, because there is a large body of research on first language (L1) development of questions a preliminary framework for analyzing question development is already available.

The development of questions in English L1 acquisition is remarkably similar across children. In terms of both question form and question function, children acquiring English L1 can be expected to pass through a predictable series of stages on their way to adult-like use of questions. In this paper, we will describe some details of L1 development of Wh-questions and consider some of the explanations that have been offered to account for the observed developmental patterns. We will then describe some recent research in the L2 acquisition of question form and question function, discussing reasons for patterns of similarity and difference. Finally we will describe the results of preliminary analyses of the question and answer interaction in the observation classes, including a discussion of the presentation of questions in the two textbook series in use there.

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* This progress report was prepared by Patsy Lightbown.

Form and Function

Before proceeding to a review of the literature, the use of the terms question form and question function should be made clear.

Form. In this report, the forms referred to are usually the interrogative words, often called Wh-words, e.g., who, what, when. the term form will also be used to refer to the arrangement of words in questions, for example, whether there is inversion of subject and auxiliary.

Function. The function referred to is usually the referential function of particular question forms. Some consideration is also given to pragmatic or discourse function. That is, the referential function of a when question is to ask something about time. However, a question such as "when is he leaving?" could have a number of different pragmatic functions, leading to different interpretations of the utterance, such as "I need to know whether to make dinner for three or for four?" "I'd like to use the car but I wonder if he needs it?" "I don't like the way he's acting and I wish he'd go." The pragmatic function could thus be, in addition to a simple request for information, a hint, a wish, an expression of annoyance. However, the semantic function remains the same. It is a question for which the semantically appropriate answer includes some mention of time.

The basis of most research on the development of questions in both L1 and L2 has been an examination of some aspects of question form (e.g., Brown, 1968; Ravem, 1974). It is usually assumed that form simply reflects function (at least refer-

ential function). In research on other aspects of linguistic development it has been shown that old forms are used for new functions and new forms may be used first to express old function (Slobin, 1973, with reference to Werner & Kaplan, 1963). That is, if a child has just come to understand something cognitively but has not yet learned how to express it linguistically, he may simply borrow some linguistic forms that are already familiar. For example, he may understand a great deal about space relations before he has acquired the locative prepositions necessary to express these relations linguistically. This doesn't prevent him from talking about space relations however. He does so by using old forms - those aspects of language that he already knows - to refer to the space relations, albeit imprecisely.

Question Development in English L1

A number of studies of the development of question form in English L1 have revealed that the order of emergence of both comprehension and production of specific question words is similar among children learning English L1 (e.g., Davis, 1932). Swain (1972) found that children who were bilingual (French-English) from earliest childhood acquired English Wh-words in the same order as English monolingual children and that the French equivalents of these words emerged in the same order.

In its simplest form, the most frequently observed order is (1) what and where, (2) who, (3) why, (4) how, and (5) when. This order fits well with what we know about children's cognitive development during this period of language development. Before they have developed anything more than single word utterances, they already seek to know the names of objects or

to find things that are lost or hidden. Thus, questions such as "what's that?" or "where's the baby?" encode meanings that are already well-established when children begin to express them linguistically. "When" questions are acquired latest, a fact which reflects the cognitive complexity of time relationships.

It should not be assumed, however, that the observed developmental sequence of Wh-words can be explained simply and sufficiently in terms of increased cognitive complexity in the Wh-word itself. The same Wh-word can have different roles in different sentences. For example, "who" can be the subject or the object of the verb, that is, the agent or the recipient of the action. Researchers who have further subdivided questions (Ervin-Tripp & Miller, 1978; Tyack & Ingram, 1977) have observed that a finer distinction leads to more information. For example, "who" as sentence subject is used and responded to considerably earlier than "who" as object (e.g., "who is eating lunch?" is easier than "who is the boy pushing?"). Thus complexity is determined not only by the Wh-word itself but by its role in the sentence.

Another factor in determining the order of development is the extent to which the non-linguistic context in which the question occurs helps the learner to know what is expected of him. Ervin-Tripp and Miller (1978) suggest that the child learns to answer questions through experience in exchanges in which the adult asks a question at the moment when the child was about to produce spontaneously an utterance which would appropriately answer the question. For example, in looking at a picture book, the adult asks "what's that?" knowing intuitively that the child is likely to say "duck" anyway. The child thus has

the experience of answering questions which he might not understand in another context.

Another factor in the order in which children develop comprehension and production of Wh-questions is the frequency with which different questions are addressed to them. Adults appear to have some special sensitivity to the linguistic capacities of children. Thus one finds very few when questions in the speech addressed to 2-year olds. Similarly, Hood (1977) has shown that why questions are rarely addressed to children who have not yet begun to use "because" spontaneously. The questions addressed to children are those which the adult believes the child can answer. Ervin-Tripp and Miller (1978) found that children made relatively few formal errors in responding to Wh-questions and that there was no great improvement in the rate of formal responses as the children grew older because adults so rarely asked questions using question words which corresponded to later stages of development. The strongest evidence for an ordered sequence of development comes from the errors children make when adults do use question words which a child has not yet mastered (see, Lightbown, 1978).

In summary, there is a sequence of development of Wh-forms in L1 acquisition which appears to follow cognitive development but is also affected by the linguistic complexity of the question utterance overall and also by some sort of natural sequencing of questions in parents' speech to children.

Word Order in English L1 and L2 Question Development

Another aspect of question form which has been studied and which will be described briefly is the development of word order. In English, both yes/no and Wh-questions normally

require a change from the standard SV word order either by auxiliary inversion or "do-support". Since both inversion and "do-support represent linguistic complexity, some researchers were suprised to discover that both L1 and L2 learners produced questions with correct word order at a very early stage of development. For example, "what's that?" and "where did it go?" are questions which may occur quite early in L1 development.

Longitudinal studies made it apparent, however, that these sentences were rote-learned wholes and did not represent the learner's ability to invert subject and auxiliary (see, Brown, 1968). Errors in word order appeared as soon as learners began to make questions on their own. In their own "creative" use of language, children would place the Wh-word at the beginning of the sentence, but then simply leave the question in declarative order, e.g., "what he's doing?" "why she can't go?". In the early stages of this creative use, in fact, the auxiliary is often missing.

For word order developmental sequences, unlike Wh-question word sequences, cognitive complexity is less important than linguistic complexity in determing the pattern. Thus it is not really surprising that the same developmental pattern has been observed among English L2 learners (Bailey, Madden, & Eisenstein, 1976). They begin by a few memorized correct forms, then begin to use incorrect forms when they deviate from rote-learned material. They subsequently learn to use inversion, with yes/no questions becoming correct in advance of Wh-questions. During this period, L2 learners whose native language forms questions by inverting the main verb (rather than an auxiliary or an inserted from like do) may try to use the same rule in English. For example, Ravem's (1974) child produced sentences such as "like-you me?" and "why drink we tea and coffee?"

The similarity in word order development for questions is quite striking. With the exception of full-verb inversion, there appear to be no important differences between L1 and L2 English question development. Since this development is primarily based on increasing linguistic complexity, it seems predictable that L1 and L2 similarities would be strong here. However, as stated above, the L1 acquisition order of Wh-words is determined largely by cognitive development and by the child's exposure based on parents' choice of questions; one would predict less L1-L2 similarity in the developmental sequence of Wh-words.

Wh-Words in "Natural" L2 Development

If it is the case that the order of emergence of Wh-words in L1 speech reflects cognitive development and parental speech, what can one expect from L2 development? Clearly the L2 learner - even at age 5 or 6 is cognitively advanced enough to understand the meaning of the principal Wh-forms. Thus one would not expect a second language learner to acquire the Wh-forms in the same order as the L1 learner.

In recent research with French L2 learners (a longitudinal study of two 6-7 year old anglophone boys learning French by going to French schools) Lightbown* (1978) found that the sequence of emergence of question words was very similar to that observed with much younger English L1 learners even though, in their native language, the children used and responded to the full range of Wh-questions. Thus, qu'est-ce que or quoi and où were earliest acquired and most frequent, while comment and quand were acquired much later.

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* Louise Tétreault was the research assistant for the French L2 question study.

However, there was an anomaly in this analysis of question word forms which led to a functional analysis of these questions. One of the children used qui more than any other question word. The functional analysis revealed that the meaning of these qui questions was not who but what. It was used in utterances such as "qui est ça?" when the child wanted to know the name of something. When he later learned to ask "qu'est-ce que c'est?" he stopped using qui for asking "what's that?" and began using it to mean "what did you say?" when he hadn't understood someone else's utterance.

The full analysis of question form and function in the French L2 speech of these two boys during their first year of exposure to French revealed that they had developed several communication strategies which made it possible for them to ask a wide range of Wh-questions (called Q-word questions in the French L2 study) even though they used only a limited number of questions words. They used Q-word substitution, replacing an unknown word by another, as in the examples with qui above. In another example, the two boys were talking about their birthdays and the adult native-speaker of French who was playing with them asked if they wanted to know when her birthday was. In asking her, Kenny used où rather than quand even though quand had just been used.

L: vous ne voulez pas savoir
c'est quand ma fête à moi?

K: où est ton fête?

They also used circumlocution, finding alternatives to using any Q-word at all. For example, in another situation where Kenny needed to ask a question about time, he had a bit

of trouble asking "when are you coming back?"

K: /[illegible]/ viens un autre fois?

L: quoi? une autre fois?

K: oui. jeudi. vendredi dimanche tu vas être ici?

In L2 development substitution errors are probably frequent when learners are outside a rigid classroom context. Felix (1976) gives a number of examples of Q-word substitution including one of an English L1 learning German L2 who used wo (German, where) to mean why and when as well as where. Circumlocutions are certainly common. Clearly this can be explained partly by the fact that the L2 speaker's cognitive maturity is so far in advance of his linguistic skills that he needs to ask questions for which he does not yet know the words. Thus the development of question function does not follow the order observed in L1 development. However, the results of this study and the study of German L2 by Felix (1976) reveal that the order of development of question words - at least in question production - is very similar.*

Both the Lightbown and Felix studies are based on second language development in "natural" environments. That is, the children received no formal lessons in their second language. Thus the order was not an order which they had been taught, but was rather one which they had learned. Nevertheless, one explanation which may account for this order in their acquisition of question words is the frequency with which the various words occur. We must be cautious however about assuming that frequency alone will explain the order. In other L1 and L2 research it has often been shown that frequency is overrridden by other aspects of the input such as saliency, communicative value, linguistic complexity, etc.

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* But see Wode (1978b) for some evidence considered contradictory.

It seems that here as elsewhere in L2 development the formal aspects of development are predictable and to a large extent similar to L1 development. However, because of the different levels of cognitive development and different communication needs and experiences of L2 learners,the development of language functions is different.

Wh-words in Classroom L2 Development

What sequence of development would we expect from learners who are learning their L2 in the more structured environment of the classroom? Do we simply assume that they will learn questions in the order in which they are presented or are there other factors which will contribute to determining the acquisition order? Should we expect to find errors such as those observed in "natural" L1 and L2 acquisition?

A first step in answering these questions is to determine the order in which Wh-words are presented to most Quebec students learning English L2. Lado (Canadian edition, 1971) does not present any Wh-questions until Unit 7 (of 20 units) in Book 1. In Unit 7, who, what, where, and how are introduced all at once, in the same frame: Wh __ is he?

V: who is he?
A: he's Mr. David Coleman.
V what is he?
A: he's a lawyer.
V: where is he?
A: in bed.
V: how is he?
A: he's sick.*

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* Lado (1971) p. 54.

From what we have seen of the acquisition of Wh-questions in natural settings, we might predict that such presentation is most likely to lead to confusion. Such confusion is probably inevitable since Wh-words have so many features in common. However, this presentation of the four major Wh-words at once and in the same linguistic frame seems to invite it. This kind of problem is by no means limited to question forms, of course. It is based on one aspect of what Richards (1973) refers to as the "contrastive approach" to language teaching. That is, when forms which are very similar are taught in the same lesson, there is the advantage of explanation through contrast, but problems may be created for the students in distinguishing among forms which differ from others in one or two distinctive features, all other features being shared.

Alexander (Look, Listen & Learn, Canadian Edition, 1972) includes "what's your (his, her) name?" in an introductory lesson, then presents two Wh-forms in the first unit (of 25) in Book 1: whose and which. In the fourth unit who is introduced. What appears in Unit 5 in the sentence "what's for lunch?" and in Unit 6 "what's this/that?" and "who's this/that?" appear. "Where" is not introduced until Unit 1 of Book 2. When is introduced near the end of Book 2 and why is never taught in this series.* In the last observation class recorded for the Grade 6 subjects, the lesson involved the presentation of the word when. The teacher asked the meaning of the word and one student in the back of the room shouted "pourquoi!" One had the impression that he felt the need for that word and was hoping he had found it.

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* It is interesting to note that in the Lado series, although many lessons in Books 1 and 2 are devoted to information questions, why is not introduced until halfway through Book 2.

Questions and answers in learners' language. As we have seen, L2 learners in natural settings sometimes use the "wrong" question word, substituting a word they know for one they haven't yet learned. L2 learners in classroom settings ask few questions that the opportunity for error rarely occurs. For example, in a sample of 10 hours of ESL teaching in the Grade 10 observation classes, the teacher asked 766 questions, the students asked 65 questions. The evidence that production errors similar to those made in the natural setting would occur if students asked more questions comes mostly from the comprehension errors in interpreting Wh-questions.

In preliminary analysis of classroom and interview data, we have occasionally seen cases where learners answered the "wrong" question. In the classroom and in informal interviews, however, the inappropriate answers appear to be determined more by the learner's expectations of what question might reasonably be asked rather than specific misinterpretations of Wh-words such as those observed in L1 learners.

Hello, Jean..	
	Hello..
What's your last name?.	
	Leblanc..
How old are you?.	
	Fine,, thank you..

Who is at the zoo too?	
	09: Billy & his sister..
Right.. What is Billy's sister doing?. Michelle,,	
	20: It's Sally..
What is she doing?.	
	20: Uh __,
Qu'est-ce qu'elle fait?. What is she doing?. Luc,,	
	10: She's holding Billy's hand..

In comprehension, in natural settings (including the classroom) we may see little which can confidently be interpreted as systematic Q-word substitution. It seems more plausible that the learner is responding to key content words in the utterance or to expectations set by the context rather than to a misunderstood Q-word. Nevertheless, this will be investigated further through controlled presentation of a series of questions with different Wh-words.

In the analysis of the classroom data from the two groups of Grade 10 students, we have found few cases where students clearly answered the wrong Wh-question. Out of the 766 questions asked by the teacher, only 8 were clearly answered as if they included another Wh-word. Such a small number could be accounted for by simple inattention although, because the pattern is so clear, our intuition suggests that they do in fact represent Q-word substitution in comprehension. That is, a "hard" question (e.g., how or when) was always answered as if it were an "easy" question (e.g., what or where). And it must be remembered that teachers, like parents, tend to ask only those questions which their students (children) can answer.

In the results from a more controlled setting, where a series of Wh-questions were asked about a group of pictures, there is stronger evidence for systematic substitution in interpretation. In a study* with Grade 8 and Grade 11 students of English L2, the methodology of Tyack and Ingram's L1 study was adapted for use with pictures in Byrne's (1967) Progressive Picture Compositions. The L2 results show clear similarity to L1 results. For example, students who gave inappropriate answers to why or how questions were most likely to respond as if the question had been a what or where question. That is, they

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* Study done by Jeffrey Barlow and Francis Bonkowski.

appeared to be answering easier, earlier-learned questions. This is shown in a "confusion matrix" modeled after that of Tyack & Ingram (1977). See Table 6.

With the cooperation of David Ingram from the Univeristy of British Columbia, we have obtained the materials used in the Tyack and Ingram L1 study of question development and intend to replicate that study with some of our ESL subjects in the coming year. It is predicted that, in spite of different cognitive levels, different experiences, and different communication needs, the development of the comprehension of question forms by L2 learners will be similar to that observed in L1 development.

Questions in teachers' speech. In a preliminary study of questions asked by the teacher in two Grade 10 classes, we found, in ten hours of classroom interaction - five hours from each class, sampled over a 6-week period, the teacher asked 766 Wh-questions.* Of these, 410 (53%) were what questions. The other major Wh-words represented from 1% (when) to 13% (why) of the total. These results indicate that students had far more opportunities to learn what questions than any other Wh-questions. And, as would be expected, there were far more appropriate responses to what questions than to other Wh-questions. Within the what questions, as would be predicted by L1 research, there was a higher degree of accuracy for what is questions than for questions where what was the subject of an action verb.

A striking aspect of the data analysis in this study is the fact that many questions which do not elicit an appropriate** response are questions which students don't really get a chance

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* Data tabulated by James Kelly.

** "Appropriately" does not necessarily mean "correctly". Thus if the teacher asked "what was Ron doing?", a response which named some activity would be accepted as appropriate whereas reference to a place or time would not.

Table 6

Confusion Matrix Indicating Response Patterns to Wh- Questions by Grade 8 & 11 Students*

Grade 8

Response Category	Transitive				Intransitive				Subject		Object	
	Why	Where	When	How	Why	Where	When	How	What	Who	What	Who
why	53	-	02	01	74	-	01	03	02	02	-	01
where	01	78	04	02	01	88	24	09	-	02	-	-
when	-	-	50	-	-	-	41	02	-	-	-	-
how	-	-	01	38	-	-	-	30	-	-	01	-
what O	22	09	07	20	10	02	19	02	08	-	90	01
who O	01	-	08	03	06	-	03	02	[illegible]	03	-	92
what S	-	-	-	-	-	-	-	-	[illegible]	01	01	-
who S	-	-	-	-	01	-	-	01	06	72	-	01
who S-P	01	-	01	-	01	01	01	-	-	01	-	-
Don't know	04	03	06	09	02	01	04	04	03	05	02	02
Can't Say	01	-	-	02	02	-	-	01	-	01	-	-
No resp.	16	10	21	26	12	08	07	43	09	06	15	11
Unclear								01			01	01

Grade 11

	Transitive				Intransitive				Subject		Object	
why	76	-	02	02	80	-	-	08	03	02	-	01
where	-	91	07	01	-	93	12	12	01	03	-	01
when	-	-	57	-	-	-	84	-	01	-	-	-
how	-	-	01	46	-	-	-	46	01	-	-	04
what O	12	09	03	14	03	-	10	-	06	-	90	04
who O	-	-	00	02	01	-	-	-	02	01	-	68
what S	-	-	-	-	-	-	-	-	59	06	-	-
who S	-	-	01	-	-	-	-	-	06	72	-	01
who S-P	-	-	-	-	-	-	-	02	01	06	-	14
Don't know	01	-	04	10	09	02	13	27	10	02	02	03
Can't say	00	03	04	01	-	-	-	03	-	-	01	-
No resp.	-	-	-	-	-	01	-	-	01	-	-	-
Unclear	03	-	02	01	02	02	-	02	01	-	01	02

N.B. Appropriate responses are boxed.

*Based on adaptation of Tyack and Ingram (1977) study done by Francis Bonkowski and Jeffrey Barlow.

to answer, either because the teacher answers it herself or because she immediately repeats or rephrases the question without giving the students time to answer. Such rephrasing occurred more frequently with the difficult Wh-questions than with what is __. That is, without waiting for an answer, the teacher expected the question to be hard. Therefore, she rephrased it to make it answerable. The analysis of these data is continuing. We want to see how teachers perceive question complexity. It is generally assumed that the order of decreasing complexity which teachers provide is Wh-question, either/or question, yes/no question. But we wish to investigate the order of complexity among Wh-questions as well.

The analysis of teachers' questions in the classroom observations will be continued and will be extended, with the development of the classroom interaction categorization system to include analysis of question-answer exchanges in which teachers attempt to simplify the students' task by altering the form of their questions.

"My daughter likes to horseback too": Native Speaker Speech to Native and Non-Native Speakers*

During transcription of the first oral interviews the researchers noticed what appeared to be errors, or deviations from standard English, on the part of native English-speakers (NSs). These were not accountable for in terms of hesitations and false starts normally encountered in transcriptions or observations of NS speech. These deviations, which included lexical simplification (e.g., "My daughter likes to horseback too."), topicalization (e.g., "Did you like it - the movie?"), and what seemed to be conscious avoidance of embedded clauses and perfect tenses, were tentatively attributed to a desire on the part of the interviewers to facilitate conversations with non-native English-speakers (NNSs).

Adjustments in the speech of a NS when in conversation with a NNS have been characterized as "Foreigner Talk". As Ferguson (1975) has pointed out, examination of such Foreigner Talk could yield important insights into the process of simplification of language, both in L2 acquisition and in studies of the process of pidginization (Schumann, 1974). In addition, Foreigner Talk bears investigation as it may constitute a significant source of input to L2 learners.

Several studies of Foreigner Talk, such as Ferguson (1975) and Valdman (1976), were based on literary sources, or on questionnaires in which people were asked to describe how they

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* This progress report was prepared by Lise Winer. The study is being conducted by Lise Winer and Bruce Barkman.

might change their speech for a variety of NNSs. Although this is interesting from a socio-linguistic point of view, it does not provide solid observational data on real linguistic behavior. The studies by Hatch et al. (1975) on data from telephone conversations, and by Campbell et al. (1977) on interviews, has been more significant. Hatch found that in one sample, NS speech resembled NNS speech in: deletion of it and copula; absence of tense marking; use of no plus verb negation; and absence of plural markers. In speech of other NSs in conversation with NNSs, however, the researchers in the Hatch study did not observe these features, but did find a variety of strategies which were used by individuals in different degrees. Among such strategies were "frequent repetition and restatement with the use of synonyms, slower delivery, clearer articulation and a general feeling of empathy for the NNSs... using heavy stress, using long pauses to allow the NNS to indicate whether he/she had understood, using confirmation checks such as 'Do you understand?', and attempting to anticipate and complete the NNS's utterances (Campbell et al., 1977, p. 98)."

Campbell et al. taped conversations between six NSs and three NNSs, for a total of 18 conversations, arbitrarily of five minutes duration each, on a topic chosen from a list of predetermined topics. The team reports that, unlike Hatch, they did not find "systematic or phonological changes in a NS's speech towards any of the NNSs (1977, p. 100)", nor did they find instances of copula or it deletion, missing tense markers, absence of plurals, etc. Like the Hatch research, however, Campbell found many instances of Wh-questions being repaired as yes/no questions, as OR choice questions, and as questions plus a possible answer. They also observed a number of strategies in NS subjects paralleling those of the NS subjects in the Hatch data.

Campbell made several suggestions to future researchers for avoiding limitations found in the design of their study. These included gathering certain information about the individuals used in the study, including NNSs with low English proficiency, making conditions under which observations were made more natural. Perhaps most importantly, they emphasize the fact that before statements regarding the pattern of modifications, or the intent thereof, can be made, "It is advisable to gather data on individual NSs interacting with other NSs before making generalizations about their strategies with NNSs (1977, p. 101)".

The second set of oral interviews, then, was designed with two objectives in mind: first, to obtain base-line comparative data on student responses from Francophone, Anglophone, and other non-native English speakers, this data to be used in several aspects of the total research project; and second, to further investigate Foreigner Talk. Thus, it was decided to follow the original plan of the initial oral interviews, i.e., pairs of students would be interviewed by one NS interviewer, using the same set of guideline questions. Interviewers for the second set of interviews were three NSs: a female ESL teacher, a male B. Ed. student, and a female undergraduate student, the latter two having had little experience in speaking with NNSs. They were told the first purpose of the interviews, but were not aware that the researchers were interested in their own speech. They were told to make the interview as relaxed as possible, but to try to get the students to speak, and to understand what they were saying.

The three interviewers each conducted 20 interviews with pairs of students from French, English, and other first languages.

The resulting collection of data transcribed from these taped interviews constitutes a good basis for both comparative studies and an investigation of Foreigner Talk.

Preliminary observation of the data appears to indicate that there are indeed patterns of Foreigner Talk apparent in the NS interviewers' speech. The nature of this modification is both complex and subject to a great deal of individual variation, although, as reported in other studies, some features appear to be common to all interviewers: slower rate of speech, use of verifying questions or statements, repair of Wh-questions as yes/no, OR choice, or questions with possible answers. As the analysis progresses, finer distinctions of Foreigner Talk in general, the nature of individual variation, and the effect, if any, of differences in the L1 of the NNSs should become more apparent.

Other Reports in Preparation

Full reports on the following studies will be submitted when they become available. The language aptitude study has not obtained data from the observation classes and the interference study has encountered procedural difficulties in the classification of learner errors. It was felt that it would be appropriate to defer reporting on these projects until further relevant information is processed.

A study of negative transfer (interference errors) is in progress, along with the analyses of other types of learner error. A sample of 8 of the Grade 10 subjects was chosen, primarily because the individuals in question participate often in class and thus produced fairly sizeable amounts of data. Classroom, oral interview and written work provide the sources for the preliminary study. Tabulations have been made for each of the eight students, and proportions of interference to other errors varies from 20 to 48 per cent by individuals and considerable variation has been noticed by source as well. These proportions would seem to contradict both the position that nearly all errors are attributable to differences between L1 and L2 and the position that errors are due only to developmental factors. It has become apparent, as a result of the preliminary work on errors, that many of the previous studies have used varying and unclearly stated

criteria for error classification. We are attempting to work out proper criteria, following the guidelines set down by Weinreich (1953), Haugen (1953, 1956), Mackey (1976) and other investigators for the comparison of languages in contact and the identification and classification of borrowings and interference.

A language aptitude test has been piloted and will be administered in the early part of the school year. Language aptitude is another variable which is believed to be associated with some of the variation in second language development. Peter Green (1974/5, 1975a, 1975b) has developmed a 42 item language aptitude test which proved a better predictor of success in learning German for adolescent children in England than either the MLAT or the LAB aptitude tests. Green's test is a Swedish language lesson without feedback. The forms of the definite and indefinite article, the present tense and singular and plural nouns are presented, and the examinees must write new forms by analogy. The final items require the construction of Swedish sentences and translation into English. We have translated the test into French and piloted it on French Canadian adolescents and young adults. The preliminary results indicate that the Green test will be appropriate for our subjects, is simple to administer and has good face validity.

Another study concerns the short-term effects of instruction on different age groups. Some preliminary results of this study are reported in the progress report on variation.

Chapter 2

CLASSROOM INTERACTION

Classroom Interaction Research

The behaviors of teachers and students in classrooms have been observed since at least the early part of the twentieth century (Medley and Mitzel, 1967). The focus of such studies has variously been on the amounts and kinds of student participation in classrooms, on the characteristics of good teachers, on the personalities of teachers, on the interactions among students, on teaching behaviors and on the interactions among teachers and students.

A number of classification systems and observation techniques have been developed for the description and analysis of classroom behaviors, including several dealing primarily with feedback to learners. Most of the classification systems are based on a quantitative description of verbal and/or non-verbal events in the classroom and the observers' qualitative judgements concerning the intent or purpose of these events. The goal of the qualitative analyses has been to determine the relative effectiveness of different kinds of teacher and student behaviors. The quantitative analyses are performed on the assumption that different durations and frequencies of particular behaviors affect the kinds and amounts of learning that occur.

Jarvis (1968) developed a framework for observing and measuring the use of different language skills which occur in the classroom. He distinguished speech produced in drills

from more spontaneous speech, as well as indicating which language was used in the spontaneous speech, the mother tongue or the foreign language.

Flanders and his co-workers (1970) developed a complex system for the description of classroom interaction which has been used, with or without modifications, in many classroom settings. They considered that verbal behavior is paramount in the learning process and that non-verbal behavior is less important. Seven categories of teacher talk are distinguished, including lecturing, praising, giving directions and asking questions. Two categories are provided for student talk, initiating and responding. A tenth category, silence or confusion, is used when the observer cannot understand what is happening. Sub-categories are used to show tendencies on the part of the teacher to limit student responses or to allow them maximum participation in the classroom interaction.

At intervals of approximately three seconds, observers note down in columns the code number for the category which predominated during that interval. Pairs of observations are obtained by pairing each observation with its immediate successor, except for the last, and with its immediate predecessor, except for the first. The pairs are then tallied in the appropriate cells of a ten-by-ten matrix. The results of such tabulations can be presented as proportions of teacher to student talk and as ratios of teacher control and student initiative.

Moskowitz (1968; 1971) adapted the Flanders model of interaction to the language classroom in a system she called FLINT (Foreign Language System of Interaction). Her modifica-

tions make it possible to take into account such characteristics as error-correction, teacher criticism of responses or students, amounts of choral response and amounts of humor. If the native language of the students is used, this is indicated alongside the major category, as is non-verbal behavior.

Wragg (1970) used a version of the Flanders system for the analysis of 10 FL classrooms. He added 10 additional codes so that talk could be labeled mother tongue or foreign language. Results from 20-minute samples of the 10 classes showed that 59% of all talk was in the foreign language, and that student use of the FL was overwhelmingly in response to the teacher's initiation.

Bellack et al. (1966) analyzed the teaching situation as a hierarchically structured "game", made up of four units - 'game', 'sub-game', 'cycle' and 'move'. Each unit above the move consists of one or more units of the next lowest level, e.g., a cycle consists of two or more moves. Moves are defined in terms of their discourse functions and higher levels in terms of their pedagogical purpose. Four moves are distinguished: (1) Structure, to set the stage for subsequent behavior or self-directed activity, such as reading; (2) Solicit, to set a task or ask a question; (3) Respond, to perform a task or answer a question; and, (4) React, to comment on previous communications or actions or to evaluate performances. The system was applied to a series of tape-recorded lessons, with the moves being characterized as to "categories of meaning" such as causal and informative, so that the substance of lessons can be described.

Sinclair and Coulthard (1975) examined classroom interaction as part of a functional approach to their continuing analysis of general discourse structure. They adopted a rank-scale model, wherein units at one rank or level are said to be made up of units from the rank immediately below, e.g., moves are made up of acts. Four ranks are distinguished below the pedagogically-defined rank, lesson, Transaction, Exchange, Move and Act, each of which is defined according to its purpose in the overall discourse. New ranks are set up when the lowest rank is perceived to have a structure, i.e., to consist of more than one unit.

Both Bellack and Sinclair and Coulthard describe theoretically similar models, but Sinclair and Coulthard provide far more sub-categorization at each rank, e.g., they describe 21 sub-classes of act, and point out some of the relationships of linguistic units to discourse functions, relationships which fell outside the scope of Bellack's study.

Fanselow (1977a, 1978) has also developed a complex system for classroom interaction, called FOCUS (Foci for Observing Communications Used in Settings), which has been applied to a variety of situations besides language classrooms. Five foci are identified: (1) the Sources of communications, e.g., teacher and student; (2) the pedagogical Moves used by Bellack; (3) the Mediums, e.g., linguistic and non-linguistic, used for the communications;(4) the Uses of the mediums, e.g., characterize and attend; and, (5) the Content which is communicated, e.g., life, procedures and subject matter. A rich variety of sub-categories for the Use and Content foci have been described. One of the uses to which the model has been put is the description of different types of feedback described

in terms of FOCUS, in an attempt to raise the rate of "successful" error treatment. FOCUS has also been used as a teacher training instrument. Fanselow has suggested (personal communication) that FOCUS be used, with expanded lists of sub-categories where necessary, to study selected aspects of the teaching setting which appear interesting rather than to attempt an exhaustive treatment of classroom interaction.

Mackey (1978) developed a classification system and adequate instrumentation for the identification and exhaustive measurement of didactic behaviors used in language classes. He and his graduate students at Laval University have also attempted to evaluate language lessons in terms of the effect they have on language learning (Mackey, 1977; Tremblay, 1974; Heechung, in preparation). Since there are a great many teacher and student behaviors, and since they occur with varying durations and frequencies, which may also have varying effects on learning, Mackey developed the polychronometer (1972). This machine, which can be operated in real-time, enables an observer to record the duration and frequency of 10 categories of didactic behavior at a time. If the lessons are recorded, these measurements can be obtained for any number of categories or subcategories of behavior.

Starting with the most obvious categories of language classroom behaviors, such as: who talks? and what is the talk used for?, Mackey (1978) developed an objectively defined set of categories for their description, based on such dichotomies as presentation and repetition and action and speech. Varying degrees of delicacy can be achieved, from the coarse, highly-inclusive category of teaching to such fine-grained sub-categories as rephrasing and remodelling by teacher or

confirming response as acceptable. Similar degrees of delicacy are obtained for learner activities. The polychronometer is capable of providing exact measurements of classroom activities, in sequential and integral form. A time line shows the sequence in which the lesson activities took place and frequency and duration totals for each activity provide an integral lesson profile.

Using quantitative measures, evaluation of lesson profiles becomes possible in terms of such qualities as variety, intensity and performance. For example, the intensity of learning activity can be measured by determining the number and kinds of things that the learners have said or done during a lesson.

Allwright (1975) studied teacher treatment of student errors for which he worked out a system with four major error categories and 18 sub-categories. Seven basic courses of error treatment are distinguished. His studies of ESL classrooms show that confusion commonly arose from inconsistent and non-unique treatment of particular error types.

Chaudron (1977a) developed a complex model of discourse for the correction of errors using Sinclair and Coulthard's system for describing classroom discourse and Allwright's suggestions for describing error treatment options. In a study of successful corrections (defined as an elicited correct response from the student who committed the error or from his fellow students) in 12 French immersion lessons, he found positive relationships, between the corrective treatment which consisted of repetition with reduction or repetition with emphasis and successful correction of linguistic errors. He found the model to be capable of describing a variety of corrective treatments and of isolating ambiguities.

In another study (1977b), Chaudron studied the priorities of teachers with respect to the kinds of errors they corrected in a French immersion program. He found that subject matter (content) errors were corrected twice as often as linguistic errors (morphology and syntax), except in the French class, where the corrections were approximately evenly divided between form and content. He found that teachers' stated priorities corresponded quite well with classroom practice. Overall "success" in error correction was 39%.

Zahorik (1970) studied student judgements concerning 16 commonly used types of classroom feedback. He wanted to determine the classes of feedback to student responses which reinforced or motivated the students and which ones explained why answers were correct or indicated how to modify incorrect answers. The students perceived that most types of feedback gave information on correctness and provided affective reinforcement, but that only two types provided explanations or additional information. In a subsequent study, Zahorik (1977) studied the relation of feedback type to lesson phases, distinguished by primary topic and purpose, in third and sixth grade classes. He found that the feedback types used both in the middle and in the close of a phase were repetition and praise. Topic changes were often signalled by a combination of praise and approving repetition.

Cathcart and Olsen (1976) examined student and teacher responses to a questionnaire on feedback in language classrooms. They found that students wanted feedback to be explicit and to receive feedback all the time, while teachers preferred implicit correction and to avoid correction of errors during conversation.

Data Collection

Audio recordings were made at weekly intervals from October to December 1977 and every two weeks since January 1978 of the three Grade 6 classes. The Grade 6 classes meet for 30-minute sessions 4 times a week. Recordings have been made once in each 7-day teaching cycle for the two Grade 8 and two Grade 10 classes, which meet for 60-minute sessions 5 times during the cycle. This means that the classroom interaction tapes represent 15-20% of the students' ESL classroom time.

Because the study is essentially observational in design, teachers and students have been encouraged to behave, insofar as possible - as if the researchers were not there. This can never fully be the case, of course, and the difficulty of observing truly natural behavior has been well documented (see e.g., Kent & Foster, 1977). Nevertheless, the frequency of the observations and the fact that they have continued over so many months have led to the greatest possible naturalness. The use of audio rather than video recording has meant that some information about non-verbal behavior is necessarily lost. However, the unobtrusiveness of the audio recording equipment has been less disruptive and has made it easier for teachers and students to forget that classes are being recorded.

Two researchers are present during each classroom recording session. With the aid of a seating chart, they write down the identification number of each student in the sequence in which he or she participates in the classroom interaction. Key words of student speech and as much relevant teacher/student non-verbal behavior as possible are also noted. The

key words and student numbers make it possible, in the subsequent transcription of the data, to identify each student speaker and thus to have a record of individual as well as group performance in the classroom.

The transcription conventions permit identification of the sources of language and language-related behavior, recognition of rising, falling, and sustained intonation contours, and unusual stress patterns. Because we are primarily concerned with syntactic and pragmatic levels of language, the transcriptions are done using standard orthography rather than phonetic script. However, phonemic representations are used when an utterance is audible but uninterpretable or when a mispronunciation causes a breakdown in communication. A copy of the transcription conventions is appended (Appendix B).

Approximately 70 hours of classroom data (from the seven classes combined) have been recorded, using Sennheiser and AIWA equipment. All these tapes have been fully transcribed and verified.

Design of the Descriptive System*

Previous research on classroom interaction shows that "all categories are arbitrary and not all of them are mutually exclusive" (Mackey, 1978, p. 11). The set of categories and the type of interaction system chosen are thus dependent on what the investigators expect to find and what turns out to be important as the data are examined. Since Sinclair and Coulthard's model attempts to relate linguistic structure to discourse structure at the rank of act, it appears that their approach may prove more amenable to empirical verification than

* The classroom interaction system was developed by Bruce Barkman, Gerard Bates, Phyllis Vogel, and Lise Winer.

some of the other models. They have also described many categories of classroom discourse which are of obvious relevance to our study. We have adopted their theoretical model, and have gone through selected portions of the transcripts, adding categories and sub-categories where the data warrant their creation.

One of our particular areas of interest is to discover what language classroom interactions lead the learners to non-didactic language use, since their ability to use English under such circumstances is one of the best indicators of their language development. Feedback is another area of particular interest, since overt knowledge of what is correct and incorrect in their speech is one of the best ways to improve incomplete mastery of the language.

Fanselow's FOCUS and Mackey's system for lesson analysis have drawn our attention to a number of categories of relevant behaviors which we have incorporated in our interaction scheme. Use of the polychronometer would provide invaluable information, but the number of passes that would be necessary to obtain the desired levels of sub-categorization remains to be determined, as does the feasibility of processing large amounts of data with reasonable accuracy. Belmore's (1975) use of a checklist of relevant features may also prove applicable to the coding and computer storage of interaction information.

Our primary interest in the classroom data centers on the language and language-related behavior of the teachers and learners. What language, how much, by whom, and under what circumstances language is produced are questions about which there is surprisingly little objective knowledge. A basic

assumption of the study is that exposure to L2 under different conditions and amounts results in learner performances of different kinds. The necessity to consider qualitative measures of language use (such as distinguishing student responses to pattern drills from their spontaneous speech), as well as quantitative measures, have guided our thinking concerning classroom interaction schemes.

The transcripts of the classroom recordings provide the following types of information: (1) the language events themselves, including some language-related behavior, such as gestures; (2) the source of these events, such as the teacher, the learners, intercom, tapes, texts, workbooks, etc. Amounts and proportions of language from the various sources can be calculated easily from the transcripts.

Information concerning the circumstances under which language occurs in the classroom can only be obtained through analysis at higher levels of abstraction than those of the transcribed language and language-related behavior. It is inevitable that any set of functional categories for the structure of classroom discourse must come to grips with the basic problem of the meanings of the events which occur there. Given the current state of knowledge concerning the nature, transmission and reception of meanings, it seemed advisable to steer away from categories which require knowledge of the intentions or perceptions of the participants involved in the interaction, and to rely as much as possible on categories which have exponents in the language events themselves.

Before describing the interaction scheme we are currently working out, some further description of the practical and

theoretical considerations which have led us to the present form of the model is in order.

First, we wanted the categories not to be defined by source, as they are in most systems. Source information is available from the transcripts, and the data indicate that the same discourse functions are realized by both teachers and learners, e.g., learners correct themselves and each other and the teacher self-corrects as well as correcting student errors. If source is not used in defining categories, the number of potential categories is reduced considerably with no loss of relevant information.

Second, the number of categories had to be small enough so that human beings could code all the utterances of the data with reasonable speed and accuracy. On the other hand, the categories could not be so broadly defined as to prevent meaningful classes of data from being retrieved by the codes. Within each category, we wanted a hierarchy of generality, such that subsequent analysis could be as specific as "incorrect treatment of an error of form at the right spot of the rejected incorrect utterance" or as general as "feedback". Mackey's system illustrates particularly well the notion of hierarchically arranged categories.

Third, we wanted to account for all the utterances in the data. Naturally, catchall and "can't decide" categories have to be available, although we hope they will be used infrequently. Coding of the data will be done from tapes and transcripts rather than during classroom observation, so it should be possible to code every utterance in the transcripts. Uninterpretable utterances are coded as ∅.

A fourth consideration was to create categories whose defining characteristics are, to the greatest extent possible, unique. This is an obvious requirement if scientific method is to be observed, but it has not always been observed in much of the classroom interaction literature, where categories are often not defined at all or are defined by a single example. We have developed a certain tolerance for this apparently cavalier approach, however, after obtaining an inter-coder reliability of .81 for two raters who separately coded 200 successive utterances of one of our transcripts using a coding scheme with seven high-level discourse categories which had no definitions other than the names of the categories! Subsequent inter-rater reliability studies, run after the provisional categories had been defined, gave results ranging from .83 to .87 in six two-way trials on 100 utterances per trial.

The current model for the analysis of classroom interaction consists of five axes. They are, in increasing order of abstraction from the raw data: (1) Source; (2) Language Events and Language-Related Behavior; (3) Immediate Discourse Function (act); (4) Mid-Level Discourse Function (move); and, (5) High-Level Discourse Function (defined in broad pedagogical terms). Axis 1 provides answers to our earlier question: by whom (or what) is the language produced? Axis 2 provides information concerning what, and how much, language there is. Axes 3, 4 and 5 specify the discourse and pedagogical conditions under which the language occurs (See Figure 5).

Each utterance in the data is characterized by a code representing one or more categories from each of the axes. Axes 1 and 2 seem to require no further explanation. On Axis 3, Immediate Discourse Function, there are empirically specifiable

Axis 1	Axis 2	Axis 3	Axis 4	Axis 5
SOURCE	LANGUAGE EVENTS & LANG.-RELATED BEHAVIOR	IMMEDIATE DISCOURSE FUNCTION (ACT)	MID-LEVEL DISCOURSE FUNCTION (MOVE)	HIGH-LEVEL DISCOURSE FUNCTION
1.1. Teacher	2.1. L1	3.2. Name	4.2. Accept 1. Confirm/Evaluate Performance Favorably 2. Follow Instructions	5.1. Non-Didactic Language Use
1.2. Students -individual -group -class	2.2. L2	3.3. Repeat 1.reduce 2.expand 3.spell 4.no change 5.change	4.3. Reject 1. Re-present 2. Overt	5.2. Management 1. Classroom Procedure 2. Structuring
1.3. Outsider - visitor - intercom	2.3. Channel -speak -write -read	3.6. Elicit 1.Ask 2.Command 3. Statement	4.4. Verify 1. Clarification 2. Confirming 3. Answers to Direct Questions	5.3. Presentation and Explanation
1.4. Tape	2.4. Linguistic Structure -major/minor sentences -interrogative	3.7. Respond 1. Answer 2. React 3. Work on Exercises or Assigned Task 4. Correct	4.5. Direct	5.4. Feedback
1.5. Written Material - text - workbook	2.5. Correct	3.8. Remain Silent	4.7. Prompt	5.5. Practice
1.6. Visual Material - filmstrip - TV - pictures	2.6. Incorrect	3.10. Locate a problem or item	4.8. Elaborate	5.6. Testing
	2.7. Vocal Noises - clicks -grouning -laughter	3.11. Paraphrase 1. definition	4.9. Structure	
	2.8. Suprasegmentals -stress intonation	3.12. Present/Explain	4.10. Comment 1. Opinions or feelings 2. laughter	
	2.9. Movement/Gesture			
	2.10. Closed List of Frequently Recurring Items			

Figure 5. A revised partial and provisional scheme for the analysis of L2 classroom interaction data.

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linguistic or paralinguistic exponents in the transcripts. Some of these immediate functions are gesture, repeat, ask, answer and restate. On Axis 4, Mid-Level Discourse Function, the exponents are less obvious and overlap at least partially with various immediate functions. Accept, reject, verify, direct, and prompt are examples of these mid-level functions, so named because of their intermediate degree of abstraction from the language data. Acceptance, for instance, may be marked by a repetition, a restatement, or gesture. Axis 5, High-Level Discourse Function, contains the following categories, in possibly hierarchical order; Non-Didactic Language Use, Management, Presentation and Explanation, Feedback, Practice and Testing. Definitions have been worked out for most of the categories. An example of how the scheme works is provided from the following passage:

T: Your parents gonna come,, Stéphane.?
S1: No no!. (S2 speaks simultaneously with S1, trying to steal his turn)
S2: My father come..
S1: I don't say anything to them..
S2: My fathers come..
S1: I don't say anything to them..

The teacher's utterance was cued by an outside source, and the students are engaging in natural use of L2.

Using the provisional scheme, the utterance, "Your parents gonna come,, Stéphane.?" can be characterized as follows: 1.1 (Teacher); 2.1 (L2, plus speak, minor sentence, question, correct, from other categories along Axis 2); 3.6 (Ask); 4.4 (Verify, by seeking information); 5.1 (Non-Didactic Language Use, cued by the intercom announcement).

A model of language treatment for L2 teaching and learning, based in part on work by Long and Chaudron, but neutral as to source, has been developed in some detail for the feedback category (see Figure 6). Since treatment of L2 data often involves response to linguistic form and semantic and pragmatic functions simultaneously, it is necessary to process each utterance twice, once on each side of the tree. It is also sometimes necessary to consider preceding and/or subsequent utterances in order to decide which path to take through the tree. An extract from the data provides an illustration of how the tree can be used to characterize language treatment.

T: Six.. What did Ron's parents do when they found out their son was lost?. Estelle..

S14: Ron's parents went the state police of the headquarters about two miles from the /kaem/ (command) post..

T: Right.. They went to the command post..

S14's answer is semantically and situationally correct, as evidenced by the teacher's utterance, "Right". The linguistic form, however, is incorrect and is corrected at the error point, with a correct linguistic form being produced by the teacher. All other paths through the tree have been found in the data, and so far, no others.

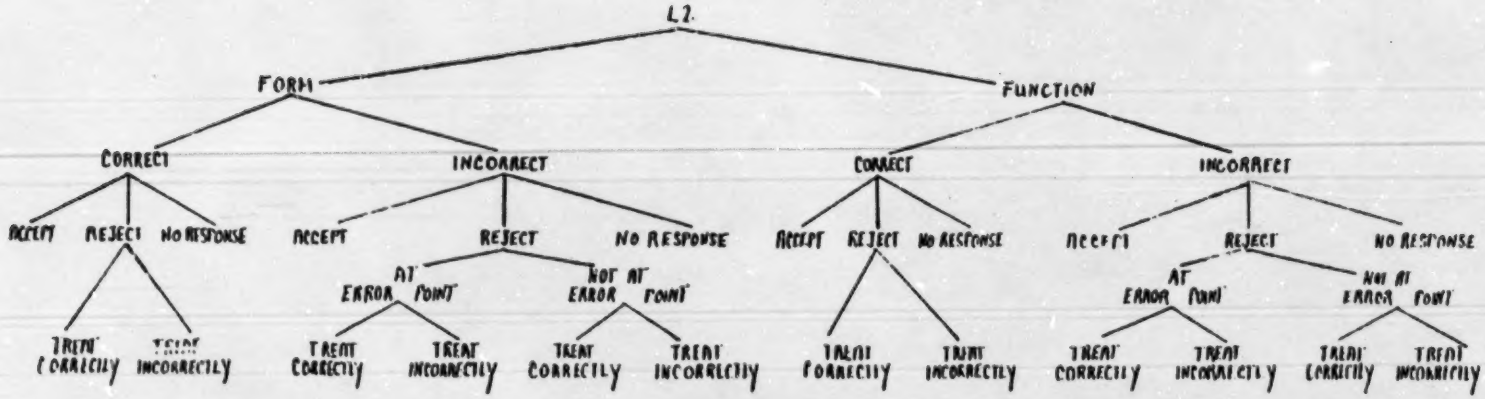

Figure 6. Model for language treatment in L2 teaching and learning.

Chapter 3

TEXT ANALYSIS

As Mackey points out (1965), all language teaching materials consist of a Selection of vocabulary and grammatical patterns of the language being taught, their Presentation in specific semantic and situational contexts, Gradation (the order of presentation) and Repetition (the frequency and distribution of the linguistic items in and across their various presentations). For the subjects in our study, the primary source of exposure to English is through the mini-languages of their classroom texts. For the secondary school students, the textbooks are the Lado English Series, and for the Grade 6 students, Look, Listen and Learn.

While the number of vocabulary items and grammatical structures in each of these texts is quite restricted, exact descriptions of their selections, presentations, gradations and repetitions cannot be obtained without computer-assisted analysis.

Laforge (1972), using computer programs developed by Mepham (1973), documented the fact that four widely-used French textbook series diverge widely from their authors' stated principles of vocabulary selection. Sciarone and Van Maris (1972, 1973) have shown the same thing as Laforge. For instance, vocabulary items introduced in dialogs do not recur in exercises which are correlated with the dialogs and which are designed to teach the items introduced in the dialogs. It seems certain that such omissions are unintentional. Nonetheless, these results

point up the necessity for computer-assisted analysis of texts, if exact knowledge of their contents is to be obtained.

Belmore (1975) has developed programs which have been used to edit, update and analyze five sets of teaching materials and these programs have been made available to us. The editing programs insure that the data conform to the investigator's expectations. The analysis is based on the intended use of the materials. Belmore found that even very elaborate classifications of materials, such as Mackey's were impossible to apply in practice, except for the very simplest types of drills. Instead, she coded each drill for the presence or absence of a set of features of interest to the investigator for a particular purpose. For example, it is possible to obtain a list of words which occur in so general a drill category as those which have an oral stimulus for which the response is also oral. Lists which meet longer lists of specifications can also be obtained. Frequency lists are calculated separately for different classes of words, since the class of words which occurs only as distractors in a multiple choice test should not be considered equivalent to the class of words which occurs in fixed phrases or as ordinary constituents in sentences. A wide variety of frequency and distribution patterns can thus be obtained.

Some of the features used to characterize each unit are the number of stimuli (visual, oral, both, etc.); the features which condition the response (grammatical manipulation, semantic, situational, etc.); whether more than one answer is possible; whether the responses are intended to be individual, choral, small group, or a combination; whether the expected behavior is totally specified; whether the exercise is gram-

matically, semantically or situationally homogeneous; whether the response is a specific manipulation of the stimulus or requires the learner to supply his own construction.

Our original intention was to use Belmore's programs to analyze the entire sets of materials the students were exposed to during the course of their English instruction. This is not feasible, because not all students have had Look, Listen and Learn at the elementary level, and the sets of materials they used are in part unknown. Even if all sets of materials were known, the time involved in data entry of several textbook series is too long for the return in information that could be expected, if say only one or two students had been exposed to a textbook series consisting of 80,000 running words.

Further, exact knowledge of the contents of the textbook materials and their intended use does not mean that we would have exact knowledge of their implementation with the groups of students under study. It therefore seems a more reasonable task to analyze the intended implementation of only those lessons in the series that were being taught during the recording sessions, so that comparisons between the authors' intended use and their actual use by our teachers can be drawn. Manual examination of the other lessons in the texts will give us a reasonably good idea of what they have been exposed to.

Belmore's programs have turned out not to be usable as written, because of incompatibilities between computer systems. Attempts are currently under way to determine whether relatively minor modifications will make it possible to use them on the Concordia system or whether they will have to be re-written or translated into another programming language. Consultations with Belmore will take place in late August, in the event that the current problems have not been resolved.

Chapter 4

RELATIONSHIPS AMONG LEARNERS' LANGUAGE, CLASSROOM INTERACTION, AND TEACHING MATERIALS

In this document we have presented progress reports on components of a longitudinal study of the relationships between what is taught and what is learned in the ESL classes of francophone students in Quebec public schools. The young people who are the subjects of this study are learning English, and they appear to be learning it principally through exposure to the language in their ESL classes. The long range goal of this project is to discover and to describe, in considerable detail, how what is happening in their classes and what they are learning, are related.

In working toward this goal, we have begun by describing certain aspects of the learners' language development through their observable behaviors in classroom interaction and other types of data, described in Chapter 2. In addition, we have begun to analyze the teaching materials used in the observation classes.

The detailed longitudinal analysis of learners' language makes it possible to determine when and under what conditions certain linguistic and communicative skills enter the students' repertoire and how these skills develop during the period of formal ESL instruction in school. The classroom interaction study traces these same linguistic and communicative skills in the learners' ESL classes. The text analysis will complement the classroom interaction analysis and give a more complete

picture of the opportunities students have for learning certain linguistic and communicative skills within a formal instructional setting.

The use of the computer will enable us to integrate the learners' language, classroom interaction, and text analysis aspects of the study. For example, specific structures traced in the learners' language study can be compared to the students' classroom exposure to the same structures, using the categorization system described in Chapter 2, to determine the conditions under which students were exposed to these structures. It will then be possible to determine what kinds of classroom activities are most likely to change linguistic behavior. One of our preliminary hypotheses is that language structures used in what we have called "non-didactic" activities will be learned earlier than others extensively practiced in more formal instructional contexts.

The plans for the second year of the study include (1) the continuation of data collection (with an emphasis on testing specific hypotheses regarding learners' language knowledge and language use); and, (2) the expansion of data analysis to cover much larger samples of the data than could be treated during the first year while the focus has been on the development of methodology, the collection of a substantial data base, and the intensive analysis of samples of the data.

The expansion of the data analysis will be made possible by the use of the computer. Computer programs have been written for data entry of tests, classroom transcripts and interviews. Verification and reformatting programs have also been written and forward and reverse alphabetic order concordance programs

of all words in the entire collection or any desired subset of the data are being tested. Programs for counting and various merges and sortings of the data have been run on test data. The massive computer entry of data will begin in September 1978 and continue throughout the year.

The expansion of data analysis will permit us to achieve the first two goals of this project: (1) to obtain longitudinal information on the ESL development of a large group of francophone learners' and (2) to describe classroom interaction in detail. The achievement of these goals will permit us to move toward the third goal which is the discovery and description of the relationships among learners' language, classroom interaction, and teaching materials. The achievement of the third goal will make it possible for us to make recommendations regarding the improvement of ESL instruction in Quebec and elsewhere.

Plans for Dissemination of Study Findings

We have already begun to participate in professional meetings and colloquoia, sharing with colleagues the preliminary findings as well as the difficulties encountered in a project of this magnitude.

In addition to making presentations at conferences for both researchers (e.g., the Los Angeles Second Language Acquisition Research Forum) and teachers (e.g., SPEAQ) we are able to use the data and the findings from this study in the training of new teachers with little classroom experience. Furthermore, the graduate students in the TESL Centre are professional educators,

many of whom have positions which permit them to influence ESL programs in Quebec. Through them, it is possible to foresee the application of recommendations and insights evolving from this study.

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WORKING DOCUMENT 8

RESULTS OF THE LANGUAGE USE QUESTIONNAIRE

Patsy Lightbown & Marlene Tash*

Introduction

The purpose of the questionnaire was to describe the subjects for our ESL Teaching and Learning Project. In addition to obtaining information about each student's contact with English, we wished to confirm our belief, based on discussions with teachers and administrators, that the students formed an essentially homogeneous population of francophones whose principal exposure to English was in their ESL classes. Further, we wanted to explore students' attitudes toward English, their English classes, and their perception of their present ability to use English and their need to speak the language when they finished school.

Pilot Administration

In order to determine that the questions were clear and would discriminate among students, the questionnaire was piloted on two groups of students at the same level as the secondary students in the longitudinal study: a secondary II class (32 students) and a secondary IV class (31 students) in a private secondary school in

* We thank Shân Evans and Lili Ullman for their participation in designing the questionnaire and Frank Bonkowski for his help in piloting it. We also thank Bob Wallace for tabulating the detailed results of Questions 14 and 16.

the Montreal area. The results were similar to those we eventually obtained using the final version of the questionnaire with the subjects of the longitudinal research: almost all the students were francophone, and their principal exposure to English was through school and television.

In general, students had no difficulty answering the questions, and only two questions (Numbers 8 and 9) were changed in the final version of the questionnaire. Question 8 ("Penses-tu qu'il te faudra parler anglais au travail quand tu auras fini tes études?") was changed because it failed to discriminate among the students. Out of 63 respondents in the pilot group, only 4 (6%) answered "non". All the others said that they would need English at work - a response we did not expect. In order to obtain more information about the students' expectations regarding their future use of English, we changed the question so that, instead of requiring only a "oui" or "non" answer, it read:

8. Penses-tu qu'il te faudra parler anglais au travail quand tu auras fini tes études?

oui non

Si oui, penses-tu que tu parleras l'anglais _____

plus que le français
moins que le français
autant que le français

The wording of Question 9 was changed because the pilot group appeared to have some difficulty in choosing an appropriate response. On the pilot questionnaire it had been:

9. Est-ce que ton père ou ta mère doivent parler anglais au travail?

oui (les deux)	ma mère seulement
non (les deux)	mon père seulement

The final version read:

9. Est-ce que ton père ou ta mère doivent parler anglais au travail?

oui, mon père et ma mère	oui, ma mère seulement
non, ni mon père ni ma mère	oui, mon père seulement

The final version of the questionnaire had 17 questions (see the Appendix). It was administered to the entire subject population: three grade 6 classes (6A, 6B and 6C) and four secondary classes (two at the secondary II level - 22-09 and 22-10, and two at the secondary IV level - 42-05 and 43-01). The students' classroom teachers administered the questionnaire after first explaining that students' answers would have nothing to do with their teachers' evaluation of them, or their mark for the course. Two members of the research team were present when the secondary students filled out the forms, but not when the elementary students did. Teachers were instructed to answer individual questions at students' desks in order to avoid influencing responses of other students. The total number of students in each class is shown in Table 1.

Table 1

Class	Number of Students
6A	26
6B	24
6C	23
Total Elementary	73
22-09	25
22-10	32
42-05	28
43-01	26
Total Secondary	111
Grand Total	184

Results

The results of the questionnaire are presented in Table 2. There was little difference between the elementary and the secondary students' responses to Questions 1-5, i.e. those questions which related to parents' mother tongue and the language spoken at home. Over 90% of the students had native French-speaking parents, and spoke French to their parents and siblings. There was similarly little difference in the responses to Question 6. None of the secondary students and only 6 of the elementary students had ever studied in an English school.

TABLE 2

RESULTS OF INITIAL LANGUAGE USE QUESTIONNAIRE (In percentages)

Question	1[a]		2[a]		3[a]		4[a]		5[a]		6		7		
Response	F	E	F	E	F	E	F	E	F	E	Y	N	TM	TF	O.K.
6A	100	0	92	4	100	0	100	0	89	0	8	92	8	42	50
6B	92	29	83	13	75	29	83	21	96	13	13	87	0	29	71
6C	100	0	96	4	100	0	96	4	100	0	4	96	4	13	83
TOTAL	91	9	93	7	91	9	92	8	96	4	8	92	4	26	70
22-09	100	0	100	0	100	0	100	4	96	4	0	100	8	32	60
22-10	100	3	97	3	100	3	100	3	100	3	0	100	0	18	82
42-05	100	0	100	4	100	4	100	0	96	0	0	100	18	21	61
43-01	96	4	96	4	92	12	88	8	96	4	0	100	0	31	69
TOTAL	98	2	97	3	96	4	96	4	97	3	0	100	6	23	70
OVERALL TOTAL	95	5	96	4	94	6	95	5	97	3	3	97	5	24	70

Question	8[b]			9[c]	10			11		12			13			14[d]	16[d]	17[e]	
Response	+	-	.	LP	N	Y-1	Y-1+	Y	N	+	.	-	+	.	-	E	E	EP	EA
6A	13	45	42	69	55	19	26	92	8	8	34	58	23	35	42	73	35	69	31
6B	14	41	45	79	33	25	42	100	0	58	29	13	67	20	13	95	58	88	12
6C	5	18	77	82	39	26	35	91	9	27	23	50	13	22	65	96	39	78	22
TOTAL	10	33	51	76	43	23	34	94	6	31	40	29	34	40	26	87	44	78	22
22-09	5	53	42	56	80	8	12	88	12	20	20	60	17	12	71	64	64	52	48
22-10	0	39	61	59	50	31	19	78	22	3	25	72	18	13	69	75	59	66	34
42-05	0	59	41	46	71	11	18	88	12	11	25	64	18	14	68	64	75	48	52
43-01	0	45	55	77	50	8	42	100	0	19	19	62	19	8	73	77	92	15	85
TOTAL	1	41	43	59	62	15	23	88	12	13	65	23	20	70	10	80	72	46	54
OVERALL TOTAL	4	38	46	66	54	18	27	91	9	20	55	25	26	58	16	83	61	59	41

NOTES:

[a] Where totals are greater than 100%, students have answered French and English. Where totals are less than 100%, students have indicated that a language other than French or English is spoken, or have not answered the question.

[b] These figures reflect only those students who answered yes to Question 8. 4 elementary students answered yes but did not complete the second part of the question.

[c] Students who have at least one parent who speaks English at work.

[d] Students who named 3 English programs(14) or 3 English singers(16).

[e] See text for explanation of missing Question 15.

KEY:
F French
E English
Y yes
N no
TM too many
TF too few
OK just right
+ more (better)
- less (less well)
. the same (as well as)
LP at least one parent
Y-1 yes, one person
Y-1+ yes, more than one person
EP English present
EA English absent

In response to Question 7, most students (70%) felt that the amount of time spent in English classes was just right. Very few (about 5%) felt that too much time was spent in English class, and a quarter of the students said that they had too few hours of English.

It is apparent from Question 8 that most of these francophone students, like those in the pilot group, expect to have to speak English at work when they finish their studies. Of the 162 students who answered yes to this question, about half (85) felt they would need to speak it as much as their mother tongue*. Most of the others (69 students) said they thought they would have to speak it less than French, and only 8 students (7 elementary and 1 secondary) thought they would need to speak English more than French. On this question, there was a noticeable difference between the elementary and secondary students: 3% of the former and 15% of the latter did not expect to use English at work. Interestingly, individual students' responses to this question did not necessarily correlate with their perception of their parents' need to use English at work (Question 9). There was considerable variation among the different classes here, with the elementary classes' responses varying from 69-82%, and the secondary ones from 46-77%.

Students in the elementary classes responded affirmatively to question 10 more often than those in the secondary classes (57%

---

* Note that in one elementary class (6C) three quarters of the children expect to need to speak English as much as French. This is particularly striking because this class is identified in the school's streaming system as the weakest of the classes.

compared to 38%), implying that they may have greater exposure to English overall. At both levels, the great majority of students said that they expected to be able to speak English some day (Question 11).

Questions 12 and 13 asked students to rate themselves in comparison to others in their class with regard to their ability to speak and understand English. More elementary than secondary students were willing to say they were better than their fellow-students (about 30% compared to about 17%), although in both cases the largest number of responses was in the middle, i.e. students rated themselves no better and no worse than fellow-students.

Television seemed to be a great source of exposure to English, with over 80% of the students in both elementary and secondary being able to name 3 English-language programs that they liked to watch (Question 14). There was some difference among the classes on this question, however. In two of the grade 6 classes 95% of the students named 3 programs. In two of the secondary classes (22-10 and 42-05) only 64% of the students named three English programs.

The programs which were named as the favorites differed only slightly for the three age groups (See Table 3).

Table 3

English Television Programs Mentioned Most Frequently (In order of frequency)

Grade 6	Secondary II	Secondary IV
1. The Price is Right	1. The Price is Right	1. The Price is Right
2. Donny & Marie	2. Six Million Dollar Man	2. Happy Days
3. Bionic Woman	3. Donny & Marie	3. Charlie's Angels
4. Six Million Dollar Man	4. Happy Days	4. Six Million Dollar Man
5. Pink Panther	5. Bionic Woman	5. Donny & Marie
6. Wonder Woman	6. Emergency	6. Emergency/S.W.A.T.[a]

[a] Mentioned with equal frequency

In addition to these programs, each of which was mentioned by 10-60% of the students in each class, there were more than 50 other programs named by two or three students. The program mentioned most frequently in every class was The Price is Right which was mentioned by 36% of the students.

There were greater age differences among the groups in their response to Question 16. The older students named more singers and and groups than the younger ones and the preferences were different. Those most frequently named are shown in Table 4. In addition to these,which were mentioned by approximately 10-50% of the students in every class within the group, there were over 75 mentioned by

Table 4

English Singers and Groups Mentioned
Most frequently (In order of Frequency)

Grade 6	Secondary II	Secondary IV
1. Elvis	1. Elvis	1. Supertramp
2. Donny & Marie	2. Beatles	2. Emerson, Lake, & Palmer
3. Beatles	3. Pink Floyd	3. Pink Floyd; Genesis; Styx[a]
4. Sonny & Cher	4. Tina Charles	

[a] Mentioned with equal frequency

at least one secondary student. Of those not included in Table 4 for the grade 6 students, there were 23 mentioned by at least one student.

Question 15 (Quels sont les trois derniers films que tu as vus au cinéma?) was discarded in the analysis because it failed to elicit unambiguous responses. The question was intended to reveal whether the students attended English films. However, rather than specifically request a list of English language films, the question was open-ended. In some cases, we could not be certain whether a particular film had been seen in its English or French version. Most of the films mentioned were given French titles, but since English

was not specified we could not conclude that the students never chose English films.

There was a significant difference between elementary and secondary students when they named their 3 favorite courses at school this year: 78% of the elementary students included English, compared to only 46% of the secondary students (Question 17).

Indices of Exposure and Expectation

As indicated in the Introduction, there were two groups of of questions: first, those which probed students' exposure to English outside the classroom (Questions 1-6, 10, 14); second, those which probed the students' attitudes toward English and English class and their perception of their present and future success in learning English (Questions 7-9, 11-13, 17). A weighting scheme was developed, assigning a number of points to the possible responses to each question (See Table 5). The number of points (positive or negative) was based on an intuitive judgement of the extent to which the response was considered important as a reflection of a student's exposure to English on the one hand, or his attitudes and expectations on the other. Thus, for example, the fact that a student claimed to speak English regularly with a parent (Questions 1 and 3) is considered an indication of greater exposure than the fact that the parent's native language is English (Questions 2 and 4).

Table 5

WEIGHTING SCHEME FOR INDICES

EXPOSURE INDEX

Question Number	Response	Number Points
1,3,5	anglais	+ 2 each
2,4	anglais	+ 1 each
6	oui	+ 2
10	oui (either 1 or 1 -)	+ 1
14	3 programs named	+ 1

Maximum: 12 points

ATTITUDE AND EXPECTATION INDEX

Question Number	Response	Number Points
7	trop peu nombreuses	+ 1
8	autant que or plus que	+ 1
9	any "oui"	+ 1
11	"non"	- 1
12,13	aussi bien	+ 1
	mieux	+ 2
	moins bien	- 1
17	EP(anglais un cours préféré)	+ 1

Maximum: 8 points

When a weight had been assigned to each question for each student, they were totalled to give each student an Exposure Index Score and an Attitude and Expectation Index Score. Individual scores on these indices will eventually be compared to students' English performance in the ESL classroom and in language use tasks administered as part of the ongoing research. In Table 6 the range and the average score for each class are shown.

On the Exposure Index there was a considerable range of individual differences both within and across groups. In terms of this index, one class (6B) appeared to have considerably greater exposure to English than the other classes.

The Exposure Index clearly distinguished the bilingual students from the non-bilinguals as well as those who had extensive contact with the language from those who had little. Findings from the Exposure Index combined with the results reported in Table 2 suggest that for most students, contact with English outside the ESL classroom is limited to television programs and popular music. This is currently being probed in small group interviews with the students.

The secondary students appeared on the average less positive toward English in their attitudes and expectations with only one class (43-01) having an average score as high as that of the overall average for the elementary students. The range of individual scores, however, is identical for the class with the most favorable Expectation Index score (6B) and the least favorable score (42-05).

GROUP SCORES ON EXPOSURE AND ATTITUDE & EXPECTATION INDICES

Class	Exposure Index Range H	Exposure Index Range L	Exposure Index Average	Attitude & Expectation Index Range H	Attitude & Expectation Index Range L	Attitude & Expectation Index Average
6A	4	0	1.38	7	- 2	3.15
6B	7[a] (9)	0[a] (0)	2.55[a] (3.13)	8[a] (8)	- 2[a] (- 2)	4.20[a] (4.67)
6C	4	0	1.74	7	- 2	3.74
Elementary Average			1.89			3.70
22-09	4	0	.96	7	- 3	3.32
22-10	4	0	1.38	7	- 3	3.22
42-05	2	0	1.00	8	- 2	2.86
43-01	4[a] (10)	0[a] (0)	1.36[a] (1.69)	6[a] (6)	1[a] (1)	3.68[a] (3.77)
Secondary Average			1.18			3.27
Overall Average			1.48			3.15

[a] These figures do not include the bilingual students (4 in 6B, 1 in 43-01). The bracketed figures are the results when these children are included.

QUESTIONNAIRE

Nom: _____

Degré: (secondaire...) _____ Age: _____

La ville où tu demeures: _____

Nom de ton professeur d'anglais: _____

Pour les numéros 1 à 13, on te demande d'encercler la bonne réponse (exemple a).

Si la réponse que tu veux donner n'est pas inscrite, écris-la sur la ligne (exemple b).

Lorsqu'une question ne te concerne pas, fais un X sur la ligne (exemple c).

Voici les exemples:

a. Quelle est ton équipe de hockey préferée?
(les Canadiens) les Maples Leafs _____

b. Quelle est la couleur de tes cheveux?
bruns blonds noirs

c. Quelle sorte d'auto possèdes-tu?
européenne canadienne X

---

1. Quelle langue parles-tu d'habitude avec ta mère?
français anglais _____

2. Quelle est la langue maternelle de ta mère?
français anglais _____

3. Quelle langue parles-tu d'habitude avec ton père?
français anglais _____

4. Quelle est la langue maternelle de ton père?
français anglais _____

5. Quelle langue parles-tu d'habitude avec tes frères et soeurs?
français anglais _____

6. As-tu déjà étudié dans une école anglaise?

   oui non

7. Penses-tu que les heures que tu passes au cours d'anglais sont _____

   trop nombreuses trop peu nombreuses exactement ce qu'il faut

8. Penses-tu qu'il te faudra parler anglais au travail quand tu auras fini tes études?

   oui non

   Si oui, penses-tu que tu parleras l'anglais _____

   plus que le français?

   moins que le français?

   autant que le français?

9. Est-ce que ton père ou ta mère doivent parler anglais au travail?

   oui, mon père et ma mère oui, ma mère seulement

   non, ni mon père ni ma mère oui, mon père seulement

10. Est-ce qu'il y a quelqu'un avec qui tu parles anglais parce que cette personne ne parle pas français?

    non oui, avec une personne oui, avec plusieurs personnes

11. Penses-tu que tu seras capable un jour de bien parler l'anglais?

    oui non

12. Par rapport à la majorité des étudiants dans ta classe, penses-tu que tu parles anglais _____

    mieux aussi bien moins bien

13. Par rapport à la majorité des étudiants dans ta classe, penses-tu que tu comprends l'anglais _____

    mieux aussi bien moins bien

Pour chacune des questions suivantes, on te demande de donner trois (3) réponses. Si tu ne peux pas fournir trois réponses à l'une ou l'autre des questions, donnes-en autant que tu peux, et passe à la question suivante.

Exemple: Quels sont les légumes que tu aimes le plus?

1. les épinards
2. les carottes
3. le chou-fleur

14. Est-ce que tu aimes regarder la télévision anglaise? Si oui, quelles sont tes émissions préférées?

1. _____
2. _____
3. _____

15. Quels sont les trois derniers films que tu as vus au cinéma?

1. _____
2. _____
3. _____

16. Est-ce que tu aimes des chanteurs, des chanteuses, ou des groupes musicaux qui chantent en anglais? Si oui, peux-tu les nommer?

1. _____
2. _____
3. _____

17. Quels sont les cours que tu aimes le plus à l'école cette année?

1. _____
2. _____
3. _____

APPENDIX B

Revised: December 1, 1977

Further revision: July 18, 1978

WORKING DOCUMENT #5

TRANSCRIPTION CONVENTIONS FOR CLASSROOM DATA

All talk and relevant situational behavior are to be transcribed.

- Teacher behavior is transcribed on the left-hand side of the page (transcription paper is available in 223-3).
- Student behavior is transcribed on the right-hand side of the page.
- Other sources are transcribed on the left-hand side of the page.

All behavior units are labelled as to source. They are: (1) utterance units (UU_s) and (2) situational behavior units (SBU_s), excluding talk. An utterance unit is all talk by an individual (or group) until he stops talking, either because he has finished what he was saying, is unable to continue, or because he was overpowered by another individual or group. Interruptions, signals of attention and other verbal contributions to interaction made simultaneously with portions of a given utterance unit are considered utterance units in their own right. Situational behavior units may precede, follow or occur simultaneously with talk. Laughter, groans, writing on the blackboard, and physical movements are examples of situational behavior. Undecipherable group talk will be treated, arbitrarily, as situational behavior.

Source Labels for Utterance Units (UU_s). Each label is placed in the extreme left-hand margin of the appropriate side of the page, to the left of the text. UU labels are followed by a colon.

1. Teacher UU labels (left-hand side)

   PAT: (Pat Power)

   SGE: (Serge Sangollo)

   DSY: (Daisy Benveniste)

2. Student UU labels (right-hand side)

   S01: (Michel B.)

   S02: (Marie C.)

   S33: (Daniel S.)

   (students are numbered from 01-3- in each class)

   S??: (student, unidentifiable)

   GRP: (more than one student, but not all)

   CLS: (all students)

   TGP: (teacher and group)

   ALL: (teacher and class)

3. Other UU labels (left-hand side)

   TRC: (tape recorder, child's voice)

   TRA: (tape recorder, adult's voice)

   RSH: (Concordia observer)

   INT: (intercom)

   OTH: (other source)

NOTE: Use teacher label only for first utterance in hand transcriptions.

Put student number only (or ??) in column provided, for hand transcriptions.

FORMAT FOR UU_S

A. SEQUENCING

1. Successive UU_S are begun on successive lines.

Example:

Pat: Which tense is that?.	
	S28: Uh _, uh _, present.?
Pat: What tense is that?. Something wrong, eh.?	
	S28: Yes..
Pat: I think you'd better take another look..	

2. Simultaneous or partially simultaneous utterance units are begun on the same line, on the appropriate side of the page.

Example:

Pat: Do I see you tomorrow?? or Friday.. Sh.. Friday..	GRP: No.. No.. Friday..
	S??: Where the hell's---?.
	(S26 speaks to S27 in French, while laughing)
Pat: Sylvain ., You finished.?	S26: Uh _, yes.. Uh no..
	GRP: No!. No!.
Pat: Guy .. Situp properly!?	

B. SPELLING

Generally, use normal spelling, American conventions. (Canadian usage generally follows the American patterns, with ambiguous and fluctuating preferences for British conventions in some words, e.g., 'Saviour' but 'honor','TESL centre' but 'Computer Center', with different publishers making different choices for the same words, e.g., 'connexion' or 'connection'. If you consider that this is an intolerable burden, spell as you normally do, but remember that data entry and editing will

take longer when variable spellings for all items must be regularized.)

1. A short list of items with variable spellings and suggested conventions follows:

Uh	[ə:]	(hesitation)
Oh	[o:]	(surprise)
Ah	[ɑ:]	(surprise, got it!, etc.)
Sh	[ʃ:]	(be quiet)
Ay(ay)	[aɪ(aɪ)]	(dismay, reproval, etc.)
Hey		
Nope	[noʔ(p)]	
Yeah	[jɛə]	
Yea	[je]	
mm	[m̩]	(approval, be careful, etc.)
Mhm	[m̩ Mm̩]	(I understand, yes)

2. Full words which are spelled out during speech will be separated by hyphens.

Example:

Pat: Have worked.. w-o-r-k-e-d..

S22: They have work for a long time..

3. Use a phonemic transcription (see phonemic symbols at the end of this document).

   a. when you are not sure that a given stretch of speech has only one lexical or grammatical interpretation.

   Example:

S15: Sandy and Sue are happy today.. /dheyrz/ not in school.. The school _, /its/ closed today.. (S15 reading)

b. when a mispronunciation leads to misunderstanding in the classroom or interview situation.

Example:

	S22: The prisoner said to her that he wanted the policeman arrange his case.. (s22 reading from another student's paper)
Pat: To what??	
	S22: To arranged his /kowz/.?
Pat: Arrange his cause??	
	S22: /kase/.. (S22 speaking very softly)
	S??: case..
Pat: What's that mean?? Is that yours?? (Pat looking at S23)	
	S23: No..
	S33: *h*our homework.?
Pat: How homework?? I'm not talking about that now..	

Modifying the conventional spelling of words to reflect mispronunciations will lead to enormous difficulties in automatic retrievals, so always use phonemic transcription. Use asterisks to enclose an omitted or intrusive phoneme and normal spelling for the rest of the word, subject to the misunderstanding proviso.

C. PUNCTUATION AND OTHER CONVENTIONS

1. Repetitions. a) when a teacher's, student's or students' utterance is an exact repetition of the immediately preceding utterance, place an equality sign where the repetition belongs.

Example:

SGE: The chair is on the table..	
	CLASS:= ..

b) to indicate that a speaker reproduces his or her own immediately preceding utterance, place an X where the repetition would have gone.

Example:

SGE: Repeat after me.. The flowers are in the vase.. X..

3. "Normal" punctuation is used with the following modifications:

a) utterance boundaries are marked by their normal or orthographic symbols and by a second symbol to indicate intonation. The first symbol is sometimes the conventional orthographic symbol, and the second marks rising, falling or sustained intonation. If there is no pause where an orthographic symbol normally occurs, use the single symbol.

. marks falling intonation

? marks rising intonation

, marks sustained intonation

Example:

Pat: I didn't hear the bell ring..	(First . is normal punctuation. Second . marks falling intonation)
SGE: Who's got the answer to number five?.	(? is normal punctuation and . marks falling intonation)
Pat: Oh, Simon.. Do five..	(, is normal punctuation, no pause)
Pat: Problems.?	(? marks rising intonation)

- An initial comma has the same value that it has in normal orthography. A second comma marks sustained intonation. If there is a short pause followed by sustained intonation, but you consider that no comma would occur in normal texts, write
  _, ,as in, "to transfer the prisoner _, to jail.."

- An initial question mark is only used if there is question structure. Question structure is defined as an utterance containing a Question Word, Aux inversion or Do insertion,

  To what?
  What is he doing?
  Is he a student?
  Can he sing?
  Did he do his homework?

- The second question mark always stands for rising intonation. Thus,

  ?? has question word structure and rising intonation.

  Is he a student??

  ?. has question word structure and falling intonation.

  What did Miss Weston say?.

  .? has only rising intonation.

  Anne.? You got a problem.?

- Self corrections are enclosed in asterisks. Enclose both the 'error' and the 'correction'.

  He want,, he wanted Mr. Fairchild to understand that...

Pat: For each mistake,, take away one mark..

(Normal punctuation and sustained intonation)

Pat: Mary _, said _, that Bill _, was a student,.

(Pat writing *Mary said that Bill was a student.* on the board)

(Underscore marks pause and , marks sustained intonation)

b. Underscore loud emphatic parts of utterances and primary word stress in polysyllabic words in phonemic transcriptions. Use an exclamation point as you would in normal punctuation.

Example:

Pat: I said had .. -d..

Pat: Pierre!. You don't even know!.

S06: Mais si!.

Pat: Blond hair behind Pierre..

S23: His /k o s/.? /kase/..

c. Use three (3) hyphens for indecipherable talk.

Example:

S?? Yeah, this ---..

S?? I have the --- assignment..

d. Use a triple underscore for a longer than normal pause. Possible interpretations are: The utterance is started over again; the speaker is unable to continue; the speaker's utterance is completed by someone else. The

completion is not introduced by underscore unless there is a long pause.

Example:

	S32: Perf___,, the past participle ___,, have ___., (as usual, the final punctuation marks indicate final intonation)
SGE: The flowers are in the ___,	
	CLS: vase..

e. Do not enclose metalanguage speech in single quotes.

Example:

SGE: What did I just say?. Mary had a pencil.. Did you say had ??	
	S03: No..
SGE: You said, Mary have a pencil.. It's had..	
	S03: Mary had a pencil.?

Source Labels for Situational Behavior Units (SBU_s). The same UU labels are to be used, without a colon. For hand transcriptions, the student number will suffice.

FORMAT FOR SBU_S

All SBU_s are enclosed in parentheses, the label immediately following the left-hand parenthesis. Do not use a final mark of punctuation as the character immediately preceding the right-hand parenthesis.

Example:

(Pat shakes index finger at S07)	
	(S03 laughs)
	(GRP groans and takes out notebooks)

1. Preceding the related UU

Place the SBU on the line preceding the UU.

Use 3rd person present verb forms.

Example:

(Pat shakes finger at S07)	
Pat: You spoke French, Gaston..	

2. Following the related UU.

Place the SBU on the line following the UU.

Use the 3rd person present verb forms.

Example:

	S03: Oh no..
	(GRP laughs)
Pat: You have to.. You must.. Obligation..	
	(GRP mutters)

3. Occurring at same time as UU

a. SBU from one source and UU from another. Place SBU on appropriate side of page, on the same line as the appropriate part of the UU. Use present progressive verb forms (-ing).

Example:

Pat: Take out a piece of paper and get ready for a dictation on the reading..	(GRP groaning and muttering, taking out paper)

b. SBU and UU from same source.

Place SBU after the relevant utterance.

Use present progressive verb forms.

It is not necessary to begin SBU on a new line.

Example:

Pat: Mary _, said _, that Bill _, was _, a student.. (Pat writing *Mary said that Bill was a student.* on board)

Note that material written on blackboard is enclosed in asterisks. The following exchanges with blackboard writing are the most complicated ones encountered so far.

Pat: Right.. John said that he was going.. Any problems.? OK.. Number three.. Nathalie..	
	(S32 writes on board *Jack said he*, erases he, puts *that he have*)
Pat: Wait!. What tense is had _, huh, Nathalie??	
	S32: Past.?
Pat: Right.. What do we change past to?.	
	S32: Uh _, past perfect.? (S32 erases have)
Pat: Change past to past perfect.. What's the past perfect of have?.	

	S32: Uh _,
Pat: How do we form it?. Remember.? Who remembers?. Guy..	
	S20: Had with past participle.?
Pat: Right.. Had plus past participle.. So you put your auxiliary had.. What's the past participle of have?.	
	S32: Perf___, the past participle ___, have __,
	S?? Had..
Pat: Had!.	S32: Had.?
	S32: Had had.?
Pat: Had had!.	
	S32: Had had.. (S32 writes *had had a party* on board)

(Pat writes *Claude says that his favorite program is S.W.A.T. (Genevieve was talking). Indirect* on board)

(Pat writes *Michel says, "I like football." (Michel was talking). Direct speech* on board)

Phonemic Transcription Conventions. The symbols to be used are based on the Trager and Smith system. They have had to be modified to some extent for compatibility with computer processing. Primary stress is indicated by underscoring the vowel symbols in polysyllabic words. Enclose phonemic transcriptions in slashes.

CONSONANT SYMBOLS

(The arrangement is alphabetic by key word)

KEY WORDS	SYMBOLS	IPA EQUIVALENTS	TRANSCRIPTIONS OF KEY WORDS
azure	/zh/	/ʒ/	/aezhir/
buy	/b/	/b/	/bay/
catch	/k/	/k/	/kaech/
chap	/ch/	/tʃ/	/chaep/
die	/d/	/d/	/day/
fie	/f/	/f/	/fay/
guy	/g/	/g/	/gay/
high	/h/	/h/	/hay/
jaw	/j/	/dʒ/	/jo/
lie	/l/	/l/	/lay/
my	/m/	/m/	/may/
nice	/n/	/n/	/nays/
pie	/p/	/p/	/pay/
rye	/r/	/r/ /ɹ/ /ɜ˞/	/ray/
sigh	/s/	/s/	/say/
sing, longer	/nj/	/ŋ/	/sinj/ /lonjgir/

Consonant Symbols (Cont'd)

KEY WORDS	SYMBOLS	IPA EQUIVALENTS	TRANSCRIPTIONS OF KEY WORDS
shy	/sh/	/ʃ/	/shay/
thigh	/th/	/θ/	/thay/
thy	/dh/	/ð/	/dhay/
tie	/t/	/t/	/tay/
vie	/v/	/v/	/vay/
way	/w/	/w/	/wey/
yes	/y/	/j/	/yes/
zoo	/z/	/z/	/zuw/

VOWEL SYMBOLS

(The arrangement is by tongue position- - 1st front,then central, then back, and by tongue height, from high to low within each position)

KEY WORDS	SYMBOLS	IPA EQUIVALENTS	TRANSCRIPTION OF KEY WORDS
bead, easy	/iy/	/i/	/biyd/ /iyziy/
bid, litter	/i/	/I/	/bid/ /litir/
bane	/ey/	/e(I)/	/beyn/
let	/e/	/ɛ/	/let/
back	/ae/	/æ/	/baek/
bud, church, alone	/uh/	/ʌ/ /ɜ˞/ /ə/	/buhd/ /chuhrch/ /uhlown/
pot, father, alms	/a/	/a/ /ɔ/ /ɒ/ /ɑ/	/pat/ /fadhir/ /amz/

Vowel Symbols (Cont'd)

KEY WORDS	SYMBOLS	IPA EQUIVALENTS	TRANSCRIPTION OF KEY WORDS
boot	/uw/	/u/	/buwt/
put	/u/	/U/	/put/
boat	/ow/	/o(U)/ /o/	/bowt/
lore	/o/	/ɔ/	/lor/
boy	/oy/	/ɔI/	/boy/
bite	/ay/	/aI/ /ai/	/bayt/
house	/aw/	/aU/ /au/	/haws/

July 18, 1978

AMENDMENT TO REVISED WORKING DOCUMENT #5

The following revisions are introduced in order to make the transcription conventions more compatible with the computer requirements for data entry. These amended conventions should be used for transcribing tapes made after September 1978.

( ) enclose actions[1]

/ / enclose phonemic transcriptions[1]

% % enclose utterances that occur or start simultaneously[2]

enclose self-corrections[2]

* * enclose missing or extra sounds, e.g., *h*our homework[1]

@ @ enclose underlined (stressed or emphasized) text[2]

--- unknown utterance - leave a space on each side[1]

' . ! ? : ; As usual, sometimes directly followed by another punctuation mark from the same group[1]

__ occurs at the end of a word (e.g, come __) and can be followed by a blank or a punctuation mark from the above group[1]

Numbers 0-9 are NOT used in the text except to identify students.[2]

Letters "a" through "z" are used as usual.

The source identifications are different:

Teachers	Students	Other
P: Grade 10 teacher	01: 13: Individual students	R: Researcher
S: Grade 8 teacher	GR: Group	IN: Intercom
D: Grade 6 teacher	CL: Class	

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[1]Same as previous convention

[2]Different from previous conventions